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What Work and Family Mean to You: An Investigation of Demographic Differences in Work-Family Conflict Using Qualitative and Quantitative Item Analyses

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WHAT WORK AND FAMILY MEAN TO YOU: AN INVESTIGATION OF
DEMOGRAPHIC DIFFERENCES IN WORK-FAMILY CONFLICT USING
QUALITATIVE AND QUANTITATIVE ITEM ANALYSES

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Industrial-Organizational Psychology

by
Deanna Burns
August 2016

Presented to:
Dr. Robert Sinclair, Committee Chair
Dr. Fred Switzer
Dr. Thomas Britt
Dr. Mary Anne Taylor

ABSTRACT

The demographic make-up of the American workforce has changed drastically over the past few decades. This change has brought forth increased women workers and dual earner couples, more demanding childcare responsibilities for working parents, and older workers. As the stress from these changes heighten, it is pertinent that employees are managing their work and family lives to achieve their most desirable level of interaction between the two life domains (American Psychological Association, 2015). Thus, work-family conflict has become a common topic of interest in Occupation Health Psychology. As the development and use of work-family conflict scales increase, it is important that researchers attend to the psychometric properties of these scales. Researchers have not yet examined demographic differences in employees' responses to work-family conflict at the item level. In order to understand if the interpretation of items is consistent by subgroup, I use Item Response Theory and qualitative data to test the research questions posed. Through the use of a semi-inductive approach, the current study sought to examine differences in the way various demographic groups – gender, age, marital status, parental status – interpret and respond to work-family conflict items. Findings indicate that the Carlson et al. (2000) scale produced DIF for a subset of the items, particularly strain- and behavior-based items are of most concern. Qualitative analyses revealed inconsistent frequencies for at least one item in each of the demographic groups. The quantitative and qualitative findings were inconsistent to some regard, and depended on the demographic in question. Implications, strengths, and limitations are discussed.

DEDICATION

For my mom and dad, Kathleen and James Burns.

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Go Tigers!

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CHAPTER ONE

BACKGROUND

The demographic and societal shifts over the past several decades, including longer workweeks and decreased wages, have drastically changed the American workforce. In line with these shifts, work and family related concerns have consistently been among the top stressors experienced by American employees (American Psychological Association, 2015). As the conflict between work and family roles becomes increasingly difficult to manage for many employees, researchers also have recognized the importance of studying work-family conflict. Loscocco (2000, p.1) described work-family conflict as undergoing a transformation from a “side bar issue” to a “front page phenomenon.”

Conflicts between work and family life have heightened due to a variety of factors including more hours spent at work, more dual-earner families, and more irregular work schedules (Bureau of Labor Statistics, 2012a; 2012b; Beers, 2000). Additionally, a survey conducted by the American Psychological Association (APA, 2011) reported that only 36 percent of U.S. workers were satisfied with the manner in which their employers assisted them in balancing work, family and other personal life demands. Consequently, drastic changes in the way people balance their work and family lives have occurred (Netemeyer, Boles, McMurrian, 1996; Poms, Botsford, Kaplan, Buffardi, & O’Brien, 2009). These changes, coupled with a steady increase in women workers, dual-earner couples, an aging workforce, and 24/7 expected availability of workers (Roberts, Povich,

& Mather, 2013), have led to transformations in the workplace and the family domain. These transformations have brought forth both new responsibilities and challenges for workers as they attempt to manage their work and family lives leading to a large amount of research on issues such as work-family balance, conflict, and positive spillover. In sum, work-family conflict has risen to the forefront of many workers concerns as an important issue as any interference between the two life domains can be detrimental to health, relationships, and happiness.

With this recent trend, several researchers have attempted to develop comprehensive scales to accurately reflect an employee's perception of work-family conflict. However, the experience of work-family conflict may not be uniform among all employees (Duxbury & Higgins, 1991). These inconsistencies call for a reevaluation of the construct as questions surrounding the definition of the construct shape the understanding of the literature and implications for practice. In other words, the meaning of the construct – work-family conflict – may differ depending on the respondent due to the experiences derived from their gender, marital status, age, and parental status.

The lack of a uniform experience may have implications for construct validity surrounding work-family conflict measures. Construct validity, as defined by Brown (1996, p. 231) is “the degree to which a test measures what it claims, or purports, to be measuring.” The assumption by other researchers around the construct-item relationship is that all workers are interpreting the meaning of work-family conflict items the same. However, this is contrary to the basic principle that life experiences shape the way individuals understand and interpret events. The construct validity evidence examined in

the current study is varied slightly from the definition provided above such that the proposed implications for construct validity lie in the possibility that multiple slightly different work-family conflict constructs may emerge based on a person's frame of reference. Thus, the nature of the construct may change as a person moves up or down in theta levels, due to the same behavior being increasingly or decreasingly more distressing depending on their demographic standing. The construct-item relation is under tested in work-family conflict research.

The purpose of the current study was to better understand demographic differences in work-family conflict on the Carlson, Kacmar, and William's (2000) measure of work-family conflict using quantitative and qualitative analyses. Through participants' interpretation of the items, the outcomes of the current study can help researchers to more precisely understand work-family conflict at the scale- and item-levels. Item-specific differences are critical to understand the construct and what the construct is measuring, when to use the construct, and who to use the construct with. This understanding will help to solidify the current knowledge and usability of work-family conflict items as they relate to various demographic groups. The current study was derived from the assumption that employees of different demographics may not be responding the same to work-family conflict questions and similar responses may be attributed to different reasons (e.g., how they define family). Therefore, investigation and empirical demonstration of this phenomenon was warranted. This study drew on a semi-inductive research approach – a combination of exploratory analyses and deductive hypotheses – stemming from differential sensitivities to work-family conflict items based on demographic standing.

I quantitatively examined employees' responses to work-family conflict items by demographics through the use of Differential Item Functioning (DIF), a form of Item Response Theory (IRT). As a follow-up, I examined the results in greater detail through the use of thematic qualitative analyses. Specifically, the demographic variables, participants' responses to the items, and their reason for answering a specific response option were included. In this study, I provide a review of previous literature on work-family conflict, describe the literature gaps and implications for construct validity, review the proposed contributing demographic variables, and explain the use of IRT, specifically DIF, and thematic qualitative analyses. I describe the sample and methods, data analyses, and conclude by discussing the theoretical and practical implications of the current study.

CHAPTER TWO

WORK-FAMILY CONFLICT

Overview. Over 20 years ago, Netemeyer et al. (1996) predicted that given the rise in dual-earner families, single-parent families, and families with eldercare duties, work-family conflict and its outcomes would become widespread for future workers. Today's workers are increasingly diverse and the workforce reflects increased participation by women, older workers, delayed childbearing, and a rising number of dual earner couples. Employees work in a world that often expects 24/7 availability with very little job security, limited flexibility and benefits that are only available to a limited number of employees (Roberts et al., 2013). These changes have a dramatic impact on the management of work and home responsibilities for many families.

Data from the Bureau of Labor Statistics (2013) show that the bulk of an individual's waking hours are spent either in work-related activities or family-related activities. An estimated 8.8 hours are spent in work or other related activities whereas, 7.5 hours are spent in activities such as leisure and sports, caring for others, household activities, and eating and drinking, all of which typically occur with a person's family. Thus, the work-family relationship has become a commonly investigated topic in recent Occupational Health Psychology research.

There is a profound "mismatch" between the way that workplaces are structured today and the needs of the modern family. This "mismatch" intensifies the struggles that American families face as they try to juggle the demands of their family and work roles (Family Security Insurance, 2010). Employers play a huge part in helping their workers

balance their work and family lives. It is important for them to realize that not only are men employed in full-time positions, but so are their wives, the men and women who work for them are most often parents who need to care for their children, and ill family members – whether old or young – need to be cared for at times.

Work–family research, as defined by Kossek, Baltes, and Mathews (2011), is the study of positive and negative processes, antecedents, and outcomes related to work and family roles. The authors note that work-family research has finally moved from the margins to the mainstream of Industrial–Organizational (I–O) Psychology, Management, and Organizational Behavior research. Although work-family related constructs have changed drastically since their first appearance in Greenhaus’ (1989) article, the interplay between an employee’s work and family roles has remained a critical part of the workplace experience. The focus has shifted from conflict, to enrichment, to the more recent “merge,” where an employee is permanently “switched on” and the two roles are essentially indistinguishable. The changing constructs that have developed over time have expanded conceptualization of the work and family domains. However, it remains critical to continue examining the work and family roles to better understand their influence on each other and, of additional importance, to study the demographic variables contributing to the way a person interprets work-family conflict.

Given that family can be defined as persons related by biological ties, marriage, social custom or adoption, including both immediate and extended family members (Edwards & Rothbard, 2000), in theory, essentially all workers may experience some form of work-family conflict. One study found that 43% of people reported “some” or “a

lot” of interference between a person’s job and their family (Shockley & Allen, 2007). Men and women agree that their biggest work-related concern is making too little money (31%), followed by a close second of not having enough time for family and personal life (29%; Friedman & Casner-Lotto, 2003).

Organizational researchers have recognized the compatibility of work and family role demands to be an important topic given the negative consequences of incompatibility between the two domains. For instance, work-family conflict can have negative effects on individual outcomes such as depression and hypertension (Frone, Russell, & Cooper, 1997). In terms of individual well-being, work-family interference has been related to psychological distress, depression, irritation, and anxiety (Hughes & Galinsky, 1994; MacEwen & Barley, 1994; O’Driscoll, Poelmans, Spector, Kalliath, Allen, Cooper, & Sanchez, 2003). Work-family conflict may also relate to poor physical health such as through unhealthy food choices and a lack of exercise, which are further related to disease and illness (Allen & Armstrong, 2006). Further, work-family conflict can have negative ramifications for the organization including absenteeism, turnover, and commitment (Greenhaus & Beutell, 1985; Michel, Kotrba, Michelson, Clark, & Baltes, 2011). Similarly, work-family conflict has been shown to be associated with decreased job satisfaction and decreased affective commitment to the organization (Casper, Martin, Buffardi, & Erdwins, 2002; Ford, Heinen, & Langkamer, 2007). Work-family conflict has even been associated with an increased likelihood to engage in workplace deviance (Darrat, Amyx, & Bennett, 2010).

Work-family Conflict Forms. In recent years, several studies have advanced understanding of how the work and family domains intertwine. More specifically, researchers have found that the dynamic between one's work and family life can encompass both positive and negative aspects (Grzywacz & Marks, 2000; Stevens, Minnotte, Mannon, & Kiger, 2007). The positive aspect, also known as work-family enrichment, facilitation, and positive spillover, is when participation in multiple roles can produce positive outcomes (Greehaus & Powell, 2006). The negative aspect is best known as work-family conflict, and is sometimes referred to as work interference with family or negative spillover. Work-family conflict is defined as a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect (Greenhaus & Beutell, 1985).

Work-family conflict has been shown to encompass three forms: time-based conflict, strain-based conflict, and behavior-based conflict (Greenhaus & Beutell, 1985). Time-based conflict is defined as multiple roles competing for a person's time, in that, time spent on activities in one role generally cannot be spent on activities in another role. Strain-based conflict exists when strain such as tension, anxiety, or fatigue in one role effects performance in another role. Behavior-based conflict occurs when specific patterns of in-role behavior may be incompatible with behavior expectations in a second role (Greenhaus & Beutell, 1985).

Work-family conflict is bi-directional, which suggests that work can interfere with family and family can interfere with work. Thus, work-family conflict can result from job demands interfering with family responsibilities, as well as family

responsibilities interfering with work (e.g., O'Driscoll et al., 2003). With this assumption, researchers have posed that work-family conflict and family-work conflict are distinct forms with separate antecedents and outcomes (Mesmer-Magnus & Viswesvaran, 2005). For example, a study by Frye and Breaugh (2004) examined the antecedents and outcomes of both work-family conflict and family-work conflict and found that work-family conflict predicted job satisfaction and family satisfaction whereas family-work conflict predicted neither. Moreover, work-family conflict was preceded by number of hours worked and family friendly policies whereas family-work conflict was preceded by childcare responsibilities. Supervisor support was an antecedent to both constructs. A meta-analysis by Byron (2005) echoes these findings in that work factors related more strongly to work interference with family and nonwork factors related more strongly to family interference with work which supports that notion that work-family and family-work conflict have unique antecedents and may require different interventions or solutions.

There are a total of six potential dimensions to be examined when understanding work-family conflict (excluding those associated with work-family enrichment; Carlson, Kacmar, Wayne, & Grzywacz, J., 2006). Three of those six dimensions were examined for the purposes of this paper: time-based work-family conflict, strain-based work-family conflict, and behavior-based work-family conflict. I choose to examine conflict rather than enrichment because the literature on conflict is further developed and supports the creation of meaningful hypotheses.

Further, I choose to examine only one direction of the construct, work-family conflict, rather than family-work conflict. This decision was, in part, due to the need for simplicity and clarity in an exploratory study of this nature. Additionally, family-work conflict stems from the home domain and thus, may be more difficult to implement interventions or suggest modifications to the work environment based on the findings. Being that the current study is the first of its kind to explore work-family variables by item-level differences, this study can be used to provide a basis for further investigation of work-family variables in this context. Based on the findings of this study, it may make sense to examine family-work conflict in future studies.

CHAPTER THREE

CONSTRUCT VALIDITY

Changes in the demographic make-up of the workforce over the past several decades have prompted researchers to question the validity of current work-family conflict scales (Allen et al. 2000; Kossek et al. 2011). For instance, women are more prevalent, workers are staying employed longer thus contributing to a more elderly workforce, employees are waiting longer to have children and divorce rates are contributing to the rise of single-parent households.

Work-family conflict and its consequences touch several areas, including but certainly not limited to Equal Employment Opportunities, benefits, and scheduling. Thus, the proper measurement of the work-family conflict construct is critical. One substantial methodological concern surrounding the use of work-family conflict items with various subpopulations is that the conception of family may differ based on a person's life experiences (which may be attributed to their demographic standing). In other words, the work-family conflict construct may mean something different to one person than it does another which would have negative implications for construct validity by altering the results attained. Theoretical and practical implications will arise if the construct validity is compromised, such that extensive methodological testing will need to be done before a scale will be deemed appropriate for a use and if inconsistencies arise, the scale will need to be reevaluated and items may need to be modified or deleted.

More specifically, it is arguable that the use of DIF – measurement bias – on work-family conflict items has construct validity implications for prior, current, and future

research. The construct validity implications include (but are not limited to) the possible creation of different scales for various subgroups, further investigation into the measurement properties associated with not only the Carlson et al. (2000) scale but other work-family conflict measures, and a tailored approach to practical work-family conflict concerns based on a person's demographic standing. DIF should be examined prior to any comparisons of means between groups, so any studies that have conducted these analyses without first addressing whether respondents are interpreting the items the same are subject to scrutiny such that the results may be due to measurement bias rather than mean differences. Thus, the use of DIF in clarifying the role of demographics in employee's responses to work-family conflict items, or any psychological construct, is an issue in need of examination.

In several studies, demographic variables have been considered moderators and/or mediators in workplace variables and their relationship with work-family conflict. Researchers have concluded that work-family conflict differs depending on the demographic variable in question and also, that some relationships with work-family conflict can be reliant on demographic variables (Byron, 2005). Although this research helps to answer some questions regarding the work-family interface, it is plausible to suggest that the influence of demographic variables occurs prior to mediation and moderation analyses, and instead occurs in an employee's interpretation of the construct. In other words, items measuring work-family conflict may mean something different to, for instance, a man versus a woman or a married versus an unmarried individual. Researchers may be "jumping the gun" by examining demographic differences in work-

family conflict items without first identifying that the groups of interest are interpreting the items in the same way. It is important to first consider if the items mean the same thing to various groups, and then, as a follow up, to consider if group membership means differ, and if moderation or mediation exists.

Although several researchers have proposed scales with strong psychometric properties (e.g., Carlson et al, 2000; Netemeyer et al., 1996), their analyses tend to omit the rigor of comparing demographic variables at the item-level through the interpretation of items. This is important to the study of work-family conflict because it is reasonable to propose that a 22-year old bachelor may be responding differently to work-family conflict items than a 45-year old, married father of four due not only to their experiences but also to their interpretation of the items presented to them. For example, a response of “5” or “somewhat agree” may be attributed to the individual’s internal perception of the item (i.e., the level of work-family conflict in a person’s mind; their true level of conflict) which would support the inference that two individuals who respond similarly are experiencing work-family conflict differently. Additionally, the pure wording, or specific words used, may be defined by one individual very differently than by another individual based on their circumstances. I do not argue that examining demographics as moderators/mediators is incorrect, but rather that there is a crucial step that must be taken prior to those examinations to be sure that the findings are due to differences in experiences and not due to differences in interpretation of items.

Irrespective of the results, the current study has implications for construct development. If the results support demographic differences in how people interpret

items, researchers will be unable to make direct comparisons of work-family conflict. Thus, results supporting DIF will matter in existing research because they will force researchers to reevaluate their findings. Moreover, various subpopulations of demographics will need to be treated differently in regards to organizational interventions (e.g., family friendly policies; family supportive training) based on their characteristics. Alternatively, if the results do not support DIF, further validation of the Carlson et al. (2000) scale will be present and there will be limited need for further examination. In other words, if the results are not supportive of the research questions and/or hypotheses, researchers can assume that the Carlson et al. (2000) scale produces similar interpretations of items across demographics and can be used to evaluate work-family conflict in any sample.

The interpretation of items, and the possible differences by demographic group, may have additional implications for the current work-family conflict theories, including Conservation of Resource Theory (COR). Hobfoll (1989) introduced the concept of Conservation of Resources as a basis for explaining stress. COR theory is a resource-based model of stress that functions on a primary assumption that people attempt to obtain, build and protect resources that help them cope with stress-related outcomes (Hobfoll, 1989, 2001). Resources are defined as objects (e.g., one's home), personal characteristics (e.g., traits and skills), conditions (e.g., intimate relationships, seniority), or energies (e.g., time, mental and physical energy, knowledge) that are valued by the individual. The basic premises of COR theory suggest that negative outcomes (e.g. psychological stress) will occur when (1) there is a threat of resource loss, (2) there is an

actual resource loss, or (3) there is an insufficient resource gain following resource investment (Hobfoll, 2001).

If the meaning of work-family conflict items is shown to be in need of further investigation, the theory supporting these studies may need to be evaluated as well. The question related to theory becomes whether you can trust standard evidence about predictive validity that would go into structural models of WFC, or other psychological variables, that do not account for the issues related to demographic differences. For instance, if the meaning of work-family conflict items differ by gender, it may be that the resources associated with gender are, in part, the reasoning behind the differences in interpretation. For example, if men are found to experience more time-based work-family conflict, it may be due to women having more resources to cope with time interference through, for instance, flexibility at work. In that case, men may be more sensitive to the work-family conflict items, not because women have a different level of conflict, but because women have additional support or resources from work to cope. Findings of this nature would warrant the investigation of resource differences by demographic group, in turn modifying the experience of resource demands within the current theory.

In order to further work-family conflict construct development, I used DIF and thematic qualitative analyses to determine how workers of different demographic groups responded to work-family conflict items based on their internal level of conflict. The results of this study were intended to establish a better understanding of whether employees are interpreting traditional measures of work-family conflict differently based on their demographics.

CHAPTER FOUR

PURPOSE AND LITERATURE GAPS

The purpose of the current study was to better address the influence that demographic variables play in a person's interpretation of work-family conflict items. The study sought to address this topic through the use of quantitative and qualitative data. DIF in IRT was used to determine how responses to the psychological construct of work-family conflict was influenced by an employee's internal level of that construct due to, possibly, their demographic circumstances. Qualitative data was used as a follow-up to the DIF analyses to determine if the qualitative responses were in line with the quantitative results and help to inform the reasons *why* individuals responded the way that they did. In other words, DIF can potentially help to demonstrate differences in likelihood of a response given the same level of conflict between subgroups and qualitative analyses can provide likely reasons why differences are present.

The following section notes several gaps in the work-family conflict literature. The gaps and associated contributions described are two-fold, in that, the first section is focused on the theoretical needs of the current work-family literature whereas the second section is methodologically focused. The gaps and contributions to be discussed are: (1) sample restrictions, (2) distinctions between time-based, strain-based, and behavior-based conflict, and (3) measurement refinement which is made up of three topics including (a) mixed-method research, (b) DIF/IRT, and (c) the qualitative approach.

Sample Characteristics. As our society moves away from the dual-parent household with children as the typical family, we, as researchers, need to be prepared to reevaluate our conceptions of “family.” Several researchers have advocated for the use of the term “work-life” rather than “work-family” to better represent those who fall outside of the typical boundaries for family (Kossek et al., 2011). In that regard, “life” or “family” can represent anything from the traditional child’s field trip, to yoga classes, to caring for elders, to a night out with friends. Having a demographically varied sample will help to address the nature of work-family conflict across various profiles of employees rather than having a strict focus on only those who are married with children. As the field as a whole moves toward a broader definition of family, studies considering various demographics become increasingly critical to understanding the nature of the work-family relationship.

One gap in the current work-family conflict literature is the sample gathered in individual studies, such that most work-family conflict studies focus on only one subset of the population at a time (e.g., woman, upper-income) rather than sampling a vast group of individuals (Kossek et al., 2011). The main contribution of the current study regarding the sample was its ability to reflect a wide range of individuals and demographics, resulting in greater generalizability than previous studies. The moderate-large size and diverse nature of the sample is a convincing strength and contribution.

Within the realm of expanding sample characteristics, a focus on income is important. Specifically, all income levels should be represented in studies making broad generalizations about the effects of variables on work-family conflict. As per recent

research calls, low-income individuals, in addition to their middle- and high-income counterparts, are addressed more thoroughly in the current study (Kossek et al., 2011). Consideration of income when discussing work-family conflict is critical due to the adversities that low-income workers face, yet most research on work and family interactions stems from data collected on middle and upper income employees (Kossek et al., 2011). As a result, less is known about work interfering with family in low-income samples (Casper et al., 2007; Griggs, Casper, & Eby, 2013).

It is important to note the distinction between low, middle, and upper income employees because all income levels are recognized as facing conflict between their work and family lives. However, Williams and Boushey's (2010) analysis suggests the precursors to work-family conflict differ considerably depending on an individual's income and thus, perceptions of work-family conflict can be altered substantially given a person's economic circumstances. Studies that only sample high or low income individuals cannot test this important assumption.

Low income workers are an important subset to address due to their likelihood of caring for family members themselves rather than hiring out, lack of access to healthcare and childcare, and scheduling inflexibility (Griggs et al., 2013; Williams and Boushey, 2010). Low-income workers are an important and distinct sample who may have different experiences when managing work and family domains compared to the more commonly studied middle- to upper-income individuals (Sinclair, Probst, Hammer, & Schaffer, 2013). The ongoing cycle for low-income people is defined by lower-income people having less resources to cope with demands and thus, making it harder for them to meet

demands. This, in turn, creates more demands for the subgroup (of which, they cannot cope). For example, Heymann (2006) provided evidence that as many as 30% of low-income workers cut back on normal activities (including work) due to family responsibilities within one week.

The current literature neglects to examine work-family conflict from the lens of low-income workers and also, fails to take into account the full range of incomes to compare differences across them. The income variability in the current sample enabled me to address the need for more low-income representation in work-family conflict studies.

In line with the previous section, the second sample-related gap in the work-family conflict literature is surrounding the lack of heterogeneity in samples. Many prior studies regarding work-family conflict restrict their samples to dual-earner couples who have children (Kossek et al. 2011). This does not allow for a clear depiction of what work-family conflict looks like across the population. Kossek et al. (2011) address the paucity of sampling heterogeneity in current work-family conflict research. Similarly, Allen et al. (2000) notes that prior work-family conflict studies have primarily focused on gender differences and dual-career vs. single-career couples. With this, little research has been conducted on individuals who are not married which inhibits the ability to make comparisons across marital status. Similarly, age and parental status face comparable difficulties in comparisons. Kossek and Ozeki (1998) also agree that most work-family research is conducted with homogeneous populations and settings which hinders the success of individual studies. The authors note that this lack of systematic management of

sample heterogeneity contributes to inconsistent findings and sometimes incorrect inferences. These findings are echoed in the current literature, in that Kossek et al. (2011) calls for more heterogeneity in future work-family conflict studies. In order to address this gap, a contribution of the current study was the addition of examining several demographic groups. Moreover, the current study used a larger, more heterogeneous sample in terms of both individual and organizational diversity.

Demographic differences in work-family conflict may be in part due to individuals' different conceptualizations of family or differences in the nature of their family demands. It is very possible that a single, nonparent faces work-family conflict just as often, and to a similar degree, as those who are married with children or that a married individual with a stay-at-home spouse faces lower work-family conflict than other married individuals. It is crucial that researchers and practitioners alike understand the differences that occur in perceptions of work-family conflict based on a person's demographics. Demographic differences must be understood before research can be considered conclusive or before initiatives can be designed to improve work-family concerns.

In other studies that do include these variables, it often turns out that these demographic variables are treated as control variables and not examined within the context of the study. This approach also limits the full understanding of how demographic groups interpret and experience work-family conflict. Depending on the topic of the study, treating demographic variables as controls may be appropriate.

However, my point is not that control variables are bad but that sometimes it is important to address the variables we treat as controls as the main substance of the study to better understand their effects.

In order to address this gap, the current sample sought to represent men and women, those of varied ages, those who are married versus single, and lastly, those who have and do not have children. Each demographic variable is discussed in detail later in this paper.

Separation of Work-family Conflict Forms. The identification of three forms of work-family conflict was established in the early introduction of the construct by Greenhaus (1985). However, it took almost 20 years before the methods reflected this distinction (Carlson et al., 2000; Netemeyer, Boles & McMurrian, 1996). Even with improved scale development, researchers today typically do not separate the construct into three forms during analyses. Carlson et al. (2000) notes that the different forms of work-family conflict were only directly tested in 7 of 25 studies they examined. In other words, researchers tend to analyze work-family conflict as one scale rather than testing hypotheses using time-based, strain-based, and behavior-based forms of the construct. There are both methodological and theoretical reasons why breaking out the construct is important.

Methodologically, the construct historically has shown relatively high internal consistency irrespective of if the construct is tested as a whole or as individual subparts (Carlson et al., 2000). Thus, for simplicities sake, researchers often test the construct as one measure. Although at times this approach is acceptable and even warranted, it fails to

address differences in the content captured by each form. For example, the differences pertaining to whether the question is referencing time-based, strain-based, or behavior-based conflict are noteworthy, in that, time pertains to a physical constraint, strain pertains to an emotional or mental constraint, and behaviors pertains to a person's acts. All of the aforementioned forms contribute to a different picture of the kind of conflict being experienced. This difference is muddled when all three forms are combined to represent one entity.

Theoretically, the sub-dimensions of work-family conflict represent different mechanisms, proceeded by different predictors and resulting in different outcomes. Greenhaus and Beutell (1985) note that although all three forms of conflict make participation in one role more difficult by virtue of participation of in the other role, each is responsible for influencing the experience of work-family conflict in its own unique way. Although discussed briefly earlier in this paper, it is important to address the theoretical differences between the three sub-dimensions. First, time-based conflict is when time allocated to one role interferes with participation in the other role. Experiences related to time-based conflict include excessive work hours, schedule conflicts or shiftwork (Greenhaus & Beutell, 1985). An example of time-based conflict would be if an individual had to work overtime and in consequence, missed their child's football game. Second, strain-based conflict is when strain experienced in one role negatively impacts participation in the other role. Experiences typically associated with strain-based conflict include role conflict, role ambiguity, and boundary-spanning activities (Greenhaus and Beutell, 1985). An example of strain-based conflict would be if stress

from a bad performance appraisal at work caused tension between an individual and their spouse. Lastly, behavior-based interference is when specific behaviors used in one role are incompatible with the other role. An example of behavior-based conflict would be if a manager displays a dominant personality at work and finds that the same pattern of behavior is ineffective with his or her children. The experiences associated with behavior-based conflict include expectations for sensitiveness and objectivity (Greenhaus & Beutell, 1985).

To address the limited examination of work-family conflict forms to date, I examined the work-family conflict items as they relate to time-based, strain-based, and behavior-based conflict. It is important to note that given the limited amount of items in the Carlson et al. (2000) scale, I used all nine items to produce the DIF analyses. The nine items are similar enough to be considered unidimensional and thus, were analyzed together as one scale for the development of the IRT parameters. However, once the analyses were created, I examined the results for trends by individual items and by conflict type, such that time-, strain-, and behavior-based items were examined by subdimension when evaluating demographic differences (i.e., individual items were examined first, and if trends existed by subdimension they were explored and reported in that fashion).

Measurement Refinement. An additional gap in the current work-family conflict literature is the lack of precise and/or comprehensive measurement strategies for work-family conflict constructs. Thus, as described in detail below, the third contribution of the

current study is measurement refinement. Allen et al. (2000) note that “improved measurement may be just as important to furthering our understanding of work-family conflict as are theoretical advancements” (p. 302). Similarly, Kossek et al. (2011) address the importance of construct clarity and notes that the current lack of clarity manifests itself in current measurement tools. One path Allen et al. (2000) discuss for improving measurement is through identifying the importance of measuring work-family conflict items through both objective and subjective means. They discuss the implications of using one versus the other and the measurement concerns associated with relying on only one method. Although, slightly different, the current study extends this call for research by using a mixed-method approach to work-family conflict research that encompasses both quantitative and qualitative research. Within this section, three issues will be discussed – (1) mixed-method research, (2) DIF/IRT, and (3) the qualitative approach.

Mixed-method research. The first issue is the need for mixed-method research. The mixed-method approach proposed will encompass both quantitative and qualitative measures. Kossek et al. (2011) called for the triangulation of qualitative and quantitative methods due to the limited influence that the combination of these methods have in current research.

By using mixed-methods to understand work-family conflict scale items, it is possible to evaluate results obtained through various means which is useful in understanding how the construct functions. Within the framework of the current study, the use of both quantitative and qualitative data was designed to bring greater insight into

the work-family conflict arena and the role that demographic factors play in how they influence the experience of work-family conflict. This approach will enable a deeper understanding of the participant's responses based on their internal level of conflict and provide detailed substance behind the numbers which will enable a clearer understanding of *why* people respond the way that they do. Using both methods simultaneously will allow for a better explanation of the influence of demographic factors on work-family conflict than would be possible by collecting and analyzing either type of data separately (Creswell & Plano Clark, 2011). Data from the quantitative findings and qualitative results will be merged to create a more comprehensive understanding of how demographic factors influence employees' interpretation of their work-family conflict.

The work-family literature will benefit from a mixed-methods approach because the strengths of each form of data will be highlighted and used to answer the overarching research questions. The mixed-method approach is used in many research designs to increase the validity and reliability of findings (Tashakkori & Teddlie, 2003). Hawkins (2013) notes that a strength of quantitative data is the generalizability to a larger population, yet quantitative data generally lacks the depth of understanding on the individual level. In contrast, qualitative data provides breadth of understanding of a phenomenon at an individual and small group level, yet it lacks the generalizability to a larger population. As described, the mixed-method approach provides researchers with the strengths of each method while offsetting some potential problems of using either method alone.

Many mixed-method approaches to date, are designed in a way that allows the qualitative portion to directly address the results obtained in the quantitative findings. Typically, the qualitative portion is performed post-quantitative analyses as a direct follow-up to the findings with a small sample who provides in-depth responses (e.g., interview-based) to support their quantitative responses. This study differs in that regard, in that the quantitative and qualitative questions were deployed at the same time, and the qualitative findings may not reflect the quantitative findings because they were not designed as a direct follow up. However, the qualitative findings were used, in part, to interpret the quantitative findings.

DIF/IRT (Quantitative). The second issue relating to measurement refinement in the work-family conflict literature is the use of DIF (a form of IRT). This approach was used to better gauge how employees are interpreting work-family conflict items based on internal perceptions of conflict and the whether the interpretation of items is influencing response choice.

Allen et al. (2000) addressed the inconsistent results obtained from work-family conflict items, and attributed these inconsistencies to measurement issues. More specifically, the authors noted the need for more rigorous psychometric work to establish the construct validity of work-family conflict measures. To further enhance the importance of precise measurement, Kossek and Ozeki (1998) called for greater consistency and development of work-family conflict constructs. Although somewhat dated, these authors still address a pressing topic in the work-family literature that has not been fully addressed by current research (see Kossek et al., 2011).

As mentioned, several researchers (Carlson et al., 2000; Netemeyer et al., 1996; Stephen & Sommer, 1996) have backed this call for research by applying rigorous validation procedures such as Confirmatory Factor Analysis but have failed to examine the items through the alternate lens of Item Response Theory. I proposed that the demographic variables of (1) gender, (2), age, (3) marital status, and (4) parental status influence the way a person interprets the work-family conflict items which then creates inconsistencies in the rating scale. This study addressed the possibility of demographic differences at the item-level through the use of DIF.

Qualitative approach. The third and final issue addressed is qualitative analyses. Although not directly designed to address the DIF findings, qualitative analyses were used to inform the DIF results and potentially identify trends in the patterned responses.

According to Hawkins (2013), qualitative research serves three purposes which include (1) to understand subjective experiences, (2) to explain how certain phenomenon relate and, (3) to better address pressing research questions. More specifically, qualitative analyses assist in understanding a person's subjective experiences by providing a voice to participants and addressing research questions in a more comprehensive manner. Qualitative methods used as part of a mixed-methods approach can assist with identifying the factors that influence employees' responses to work-family conflict items as well as explain their influence.

Regarding this study, the qualitative findings were intended to assist in interpreting and explaining the quantitative analyses by providing further insight into the underlying reasons for individuals' survey responses. More specifically, there are two

chief purposes for collecting qualitative data in the current study. The first purpose was to assist with the interpretation of the quantitative findings by explaining *why* various demographic groups may respond differently to items. The second purpose, which was of much broader scope, was to better address the underlying reasons behind *how* and *why* employees face work-family conflict.

CHAPTER FIVE

QUANTATIVE AND QUALITATIVE ANALYSES

The primary purpose of this study was to examine work-family conflict at the item-level using the (1) DIF approach to IRT and (2) qualitative analyses to determine if the work-family conflict scale behaves differently under varying conditions, where conditions are defined as different demographic groups. To my knowledge, no studies have examined the possibility of DIF on work-family conflict items and only a limited number of studies have conducted work-family conflict qualitative analyses.

To date, the psychometric properties of the Carlson et al. (2000) scale have been examined using Confirmatory Factor Analysis (CFA), however, in this paper I demonstrate that IRT methods can increase understanding of the measure's functioning through providing rich item-based information. In contrast to classical test theory, IRT analyses are not dependent on the sample used to generate the parameters, and are assumed to be invariant (within a linear transformation) across divergent groups within a research population and across populations (Reeve, 2002).

Although Carlson et al. (2000) performed a CFA on the scale, there are several aspects of analysis not addressed by simply using CFA. While CFA methods are an important step in validating a measure, such methods do not consider variance that can occur in responses at the item level nor do they achieve the depth of understanding that a qualitative analysis would. Similarly, although the Carlson et al. (2000) study examined gender differences, the authors did not examine other demographic variables that may contribute to understanding the meaning of the items. CFA and IRT both possess positive

and negative qualities and thus, these two forms of analysis should be used in conjunction with each other to create a holistic picture of what the given scale represents and under what circumstances it should be used.

IRT Defined. IRT is a type of measurement model in which item responses are predicted using properties of persons, termed theta, and properties of items, termed difficulty, discrimination, and guessing. IRT models explicitly recognize that measurement precision may not be constant for all people (Fraley, 2000) and thus, DIF occurs when an item is more discriminating or is more difficult or more extreme in one group as compared with another. Please note, due to the nature of the current study (i.e., polytomous design), the guessing parameter was not be used in the analyses and, in turn, a two-parameter model was used (i.e., discrimination and difficulty).

Harvey and Hammer (1999) note that “IRT seeks to model the way in which latent psychological constructs manifest themselves in terms of observable item responses” (p.353), which will influence the development, evaluation and scoring of tests/measures. IRT techniques allow for more accurate examination of the psychometric functioning of each item, as well as the scale as a whole (Sliter & Zicker, 2014). Broadly speaking, IRT allows for estimation of latent levels of a given trait based upon both the responses given by the respondents and the properties of the items themselves.

The current study departs from traditional IRT because the examination of items was not dependent on whether an item is right or wrong but rather, through the use of a polytomous design, dependent on how favorable a person was towards the topic in

question. Polytomous models represent those items that have more than two options that are not necessarily right or wrong but instead measure across a wider range of the trait continuum. This type of model is most often used in psychological measurement with Likert scale use.

In order to interpret IRT analyses, it is important to understand the terminology associated with IRT, and more specifically DIF. In line with this, it is also important to understand the results produced from an IRT analysis and their meaning in lay terms. To start, DIF is created when two individuals have the exact same level of theta, but respond differently (e.g., more extreme) to an item. In other words, there is a disconnect between what is in a person's mind and what response option they circle. For example, in the current study, DIF would exist if a man and a woman have the exact same level of theta (e.g., $\theta = 1$), but a woman responds a "5" on paper, and a man responds a "7" on paper. DIF would not exist if two people with the same level of theta (e.g., $\theta = 1$), both circle the same response options throughout the entirety of the theta scale. The question answered with a DIF analysis is for all people who the same level of theta, what is the probability of them endorsing the same response option.

It is important to note that every person is deemed to have a specific level of any given underlying trait (Fraley, 2000). This underlying trait is typically defined by the Greek letter theta. To explain this further, theta is how a person feels in their mind. In this context, theta would represent a person's internal level of conflict between work and family. Theta is the true level of conflict for a person. In classical test theory, theta would be considered roughly equivalent to a person's true score. In Figure 1, theta is represented

on the x-axis ranging from approximately -3 to 3, no conflict to high conflict respectively. Theta, by definition, is distributed standard, normal such that a score of $\theta=0$ represents average status on the trait.

The response option that someone circles is represented on the y-axis and termed probability of response due to it reflecting how likely someone is to circle a specific response option. The probability of response axis is roughly in line with the response options (i.e., 7 point agreement scale). IRT focuses on the relationship between theta and the probability of responding in a specific way; this is also known as the item response function (IRF). This curve is defined by three main features including (1) the probability of matching theta with the item's answer increases as one moves along the trait continuum, (2) the curves are nonlinear, and (3) the IRFs differ in shape.

The IRFs differ in shape due to two underlying dimensions, which are difficulty and discrimination. These two additional terms are critical to understanding and interpreting a DIF analysis. Discrimination is the slope of the IRFs. The discrimination parameter (*a* parameter) tells us how effectively an item can discriminate between high and low individuals on a particular trait. Discrimination is informative in that it tells us if two people with very close thetas (e.g., 0 and 0.5) can be discriminated between. In other words, discrimination would be present if two people with close thetas display different probabilities of responses (see Figure 3; Table 3). Difficulty is an item's location (location of highest information point), or how far left or right the graph is. The difficulty parameter (*b* parameter) is the threshold parameter that indicates the level of theta needed for a higher/lower response option. To interpret difficulty, the further right the

graph is, the higher the theta needs to be for a higher number response option to be circled and vice versa for left (see Figure 2; Table 2). threshold at which the probability switches from favoring one choice to favoring the other

Figure 1 (see Table 1) provides an example of what the IRFs – the relationship between theta and the probability of responding in a specific way – produced from the IRT analysis may look like. There is one IRF produced for women, and one IRF for men. In Figure 1, the x-axis represents theta. In the context of this study, theta would represent a person's internal level of work-family conflict. The y-axis represents the probability of a person circling a certain response option. Figure 1 portrays an output that would support DIF such that men and women with equal levels of theta are responding differently to the item (especially at moderate to high levels of theta). The two parameters measured in the DIF analysis – discrimination and difficulty – can be shown on the graph as well. For certain levels of theta, specifically theta ranging from about 1.0 to 1.5, the graph shows high discrimination in this example. This is because two people with relatively close thetas have different probabilities of responses. The difficulty parameter can be displayed by looking to see how far left/right the graph is. In this example, the graph is more right, indicating that a higher theta level is needed in order to endorse a higher response option.

For clarity purpose in the results section, it may also be important to be able to work the output backwards. Instead of beginning with theta and examining response options, it may answer additional questions by first looking at the response option and then determining the level of theta associated with the response choice. For example, if

two individuals both choose the same response option (e.g., 5, somewhat agree), but the graph produced is different for the individuals' respective demographic groups, it may indicate that one individual has more/less internal levels of conflict in their mind compared to the other individual. In other words, both individuals may answer a "5" but their internal level of work-family conflict may reflect a 0 and a 1. This demonstrates that a "5" may not mean the same thing to two different individuals due to their group membership.

The question as to *why* two people with the exact same level of theta respond differently is not answered through standard DIF analyses. I use the current literature to try to explain why there may be demographic differences in responses. In part, I propose that those in different demographic groups may have different life experiences or definitions of family which influences their sensitivity towards the items, and in turn influences their responses. For example, social desirability may influence men to key in on the "work" part of the question and women to key in on the "family" part of the question. By doing so, two people of different genders may have the exact same level of conflict in their minds, but may respond differently based on the key words they are picking up on in the question posed. This finding may provide theoretical insight about the words in the question, having further implications for current work-family theories. A particular advantage of the current study is that it provides qualitative analyses to help clarify the *why* behind the differences more precisely and either support or dispute the key word proposition posed above.

Examination of IRT (Benefits of IRT). Fraley (2000: 353) notes that “a major advantage of IRT models is that they are based on an explicit measurement model that characterizes the relation between a latent trait and an observable manifestation of the trait. In other words, IRT is a model-based approach to psychological assessment.” IRT can answer many questions for both the survey administrator and the survey respondent by allowing each item to be individually examined in detail (Cooke & Michie, 1997). IRT can help answer several questions by (1) assisting in the elimination of items that do not provide any significant information about the trait of interest, (2) selecting items that either (a) give accurate assessments across the whole range of a test, or (b) cluster around a diagnostic cutoff and thus provide maximum discrimination in this critical range of the trait, and (3) IRT can be used to identify item bias or; differential item function (DIF).

As noted previously, the third option – DIF – was examined in the current study. A benefit of using DIF analyses, is the ability to know how the work-family conflict measure is behaving across different groups. This knowledge is pertinent to the soundness of all work-family conflict studies because it can help identify demographic differences in how people respond to work-family conflict items, which can aid in understanding when to use work-family conflict measures. The support of DIF would indicate that two individuals of different demographic groups that have equal levels of theta but are responding differently (e.g., circling different response options). Results supporting DIF help researchers and practitioners implement and interpret work-family conflict measures with better knowledge of who, how, and when the measures should be used. In contrast, a lack of findings would also be beneficial to the work-family conflict

literature, in that, a lack of differences would support combining groups in both research and practice. If DIF is not supported, it will indicate that two people of different demographic groups who have the exact same level of theta, also have the exact same response choice, which further bolsters confidence in the validity of the measure.

Qualitative Analyses Defined. Qualitative analyses are a technique used by researchers to examine how people think about what is happening to them (Smith & Osborn, 2007). Mainstream psychology is still strongly committed to quantitative and experimental methods, however certain areas of psychological research are best suited for an in-depth analysis of a participant's reasoning behind their quantitative responses.

Braun and Clarke (2006) describe qualitative analyses as “incredibly diverse, complex and nuanced” (p. 4). The authors describe different techniques for conducting qualitative analyses which include thematic analysis, IPA, and grounded theory. IPA and grounded theory are more theoretically driven than thematic analysis. IPA focuses mainly on phenomenological epistemology – the study of individuals' lived experiences through the sharing of personal reflections – whereas grounded theory is used to generate a plausible theory of the phenomena. Thematic analysis is a foundational qualitative analysis method that identifies patterns in responses. The thematic analysis method was the form of qualitative analysis used in the current study.

Braun and Clarke (2006) outline the definition, method, and advantages/disadvantages of thematic analysis. The authors describe thematic analysis as “a method for identifying, analyzing, and reporting patterns (themes) within data” (p. 6).

Within thematic analyses, a theme captures something important about the data in relation to the research question. There are two forms of thematic analysis: theoretical thematic analysis and inductive thematic analysis. Theoretical thematic analysis is most often driven by theory or analytic interest in the area (analyst-driven). Inductive thematic analysis means the themes are strongly linked to the data themselves. A combination method was used for the current study, in that theory drove the plausibility of the themes but I decided, based on the data patterns, which themes prevailed.

The phases to doing a thematic analysis include (1) familiarizing yourself with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report (Braun & Clarke, 2006). Each of the steps will be discussed in more detail in the “Methods” section of this paper, as I describe how each was conducted in the current study.

Examination of Qualitative Analyses (Benefits of Qualitative Analyses). Braun and Clarke (2006) describe the benefits of using thematic analyses. One main advantage to using this form of qualitative analysis is that the method is flexible. This flexibility can be attributed to the themes stemming from the data itself rather than grounded in firm theory. Due to its flexibility, thematic analyses often provide a rich and detailed, yet complex account of the data.

Furthermore, thematic analyses search for themes or patterns across an entire data set rather than within a subset of a dataset (commonly used for individual interviews or case studies). Moreover, all of the data points are used in a thematic analysis rather than

selecting individuals based on desired characteristics. Bearing this in mind, the thematic analysis method can be used across a range of research questions.

Other thematic analysis advantages include ease of use, and ability to be learned rapidly (Braun & Clarke, 2006). Additionally, the method can be useful in summarizing key features of a large body of data and can highlight similarities and differences across the dataset. Lastly, thematic analyses can generate unanticipated insights while allowing for social and psychological interpretations of the data.

CHAPTER SIX

SEMI-INDUCTIVE RESEARCH APPROACH

To date, the small body of literature reflecting item-level analyses of psychological scales is limited. Although current psychological literature focuses substantially on theoretically-driven studies, recent researchers have argued that a series of informed exploratory studies is sometimes needed to gain knowledge about phenomena (Vandenberg & Stanley, 2009). Exploratory analyses can be beneficial in that they guide theory development and subsequent confirmatory tests, in addition to bringing novel and useful findings into light (Mun, Bates, & Vaschillo, 2010). In line with this, recent researchers have called for a more inductive approach to research studies, in order to explore new ways of thinking and produce novel bases for theory generation (Spector, Rogelberg, Ryan, Schmitt, & Zedeck, 2014).

Spector, et al. (2014) describe the need for and soundness of the inductive approach in psychological research. One main descriptor of the inductive approach is that the method does not report tests of deductive theory-driven hypotheses, but rather present exploratory findings not limited by an explicit *a priori* theoretical framework. Spector et al. (2014) call for the use of the inductive approach due to the over-reliance on the idea that studies must be grounded in established theories. The literature suffers from a purely deductive approach such that the discouragement of new thinking inhibits the finding of new phenomena.

The current literature surrounding demographic differences in work-family conflict at the item level are sparse. Given that the research in the proposed domain is

still in its infancy and theoretical mechanisms explaining the expected relationships are unclear, the current study warranted an exploratory approach. The current study used a semi-inductive approach to explore the possibility of demographic differences in responses to work-family conflict items. A semi-inductive approach calls for a blend of (1) deductive theory-driven hypotheses and (2) inductive research. This combination of exploratory research with the use of deductive hypotheses can minimize the constraints of hypothesis tests and uncover natural and realistic occurrences in applied settings (Spector et al., 2014). Moreover, by using a semi-inductive approach, I did not limit the findings to be in line with pre-established theories but rather, allowed the research to manifest and establish its own boundaries through the use of both quantitative and qualitative research methods. This approach can increase conceptual knowledge about the work-family conflict scale by recognizing novel findings and can serve as a step towards establishing theoretically meaningful explanations for differences in scale responses by demographic group.

In line with the semi-inductive approach, I propose hypotheses for the quantitative IRT analyses. The hypotheses are based on current findings that represent mean differences by demographic group. However, if the research questions and hypotheses are supported, the current literature will need to be re-evaluated given the nature of the findings. Thus, the discussion of prior research is not used as a support for the hypotheses so much as it is to show that there is, in some form, sensitivity to work-family conflict items that differ by the various demographic groups explored.

CHAPTER SEVEN

DEMOGRAPHIC DIFFERENCES

Because the semi-inductive approach is used in the current study, I formulated hypotheses regarding demographic differences in responses to work-family conflict items, but was also open to non-hypothesized findings that emerge. I hypothesized relationships between the demographics discussed below and the three forms of work-family conflict, however, the primary purpose of this study is to first identify whether there was a different likelihood of a response for groups given the same level of the construct (theta) which would further enhance construct development of the Carlson et al. (2000) scale. This is reflected in the research questions proposed in the following sections.

The following sections address the various demographics examined in this study. The demographics included (1) gender, (2) age, (3) marital status, and (4) parental status. The proposed study was based on the assumption that demographic groups have non-uniform experiences associated with work-family conflict which may have implications for the construct validity of the measure. Allen et al. (2000) notes that specific life events or different stages in a person's career may exacerbate work-family conflict experiences and outcomes. Although important, the construct validity of work-family conflict has not yet, to my knowledge, been tested using DIF. This is important because we, as researchers, cannot confidently say that there are differences in work-family conflict measures pertaining to demographics without first knowing that all individuals are interpreting the items the same. For example, we cannot say that men and women show

differences in their means on work-family conflict items without first confirming that a “4” to a man, and a “4” to a woman is representing the same entity.

The specific hypotheses that I proposed are based on previous work-family conflict research that demonstrates demographic differences in work-family conflict items in some regard. The hypotheses are based on mean differences found in the current literature. It is critical to point out that mean differences are different than interpretation differences found from a DIF analysis.

Mean differences represent those differences in responses that arise *after* it has been established that two individuals from different demographic groups have the exact same level of conflict and are responding exactly the same to the items. Once both of those outcomes are met, mean differences can be evaluated and are reflective of true mean differences. However, interpretation differences occur if two individuals have the exact same level of conflict, but respond differently to the items (i.e., DIF). The latter – interpretation differences – was tested in the current study but the hypotheses for the latter were based on the former – mean differences. Although this reasoning may be seen as circular, because the item-level work-family conflict literature has yet to emerge, the support for hypotheses must be based on existing literature.

The general assumption proposed here is that demographic groups are responding differently either due to mean differences or interpretation differences. If the hypotheses are supported in the current study, it would demonstrate that various demographic groups do have actual differences in their responses. The alternative would support that the differences between demographic groups are based on feelings, an artifact due to

differences in the likelihood of a response given equal levels of the construct, and not on being due to real group differences. Irrespective of whether the difference is due to observed mean differences or true construct biases, it is clear that one demographic group is more sensitive to the item being examined than the other. In other words, the mean differences found in prior studies suggested a good area to look for differences that may be due to true work-family conflict biases – DIF – and not to mean differences.

Gender. For the purposes of this study, the categories associated with gender were (1) men and (2) woman. In comparison to the other three demographic variables, gender has been the most commonly studied demographic in relation to work-family conflict. This may be due to the seemingly clear differences between the men and woman roles in the work and family domains. For example, women often complete more of the housework whereas men are typically categorized as being breadwinners. However, this “clear” distinction is becoming substantially less clear as women and men begin to share both work and family roles in untraditional ways. In line with this, although still less common, women often may be the dominant bread winners with men being “stay-at-home” fathers (Glynn, 2012). Nonetheless, the role differences are important to examine.

Many of the antecedents and outcomes associated with work-family conflict may differ based on gender. For example, men may portray a more aggressive personality style compared to women regardless of the domain (Gerber, 2001). Further, women may prefer a stronger social support network from their organization and home compared to men (Antonucci & Akiyama, 1987). Findings by Duxbury and Higgins (1991) suggest

that men may perceive higher work demands, while women perceive higher family demands. Thus, the source of work-family conflict may differ. These differences may stem both from societal and cultural expectations based on gender, as well as differing valuations of work and family roles (Cinamon & Rich, 2002).

Milkie and Pelota (1999) used a sample of married, employed Americans to examine gender differences and found that although men and women report similar levels of work-family conflict, the predictors of this construct differ widely. For men, the predictors of work-family conflict included longer work hours, wives who worked fewer hours, perceived unfairness in sharing housework, marital unhappiness, and tradeoffs made at work for family and at home for work. For women, only marital unhappiness and sacrifices at home were related to work-family conflict.

Although gender differences in the experience, antecedents, and outcomes of work-family conflict have been identified, little work has sought to better understand gender differences in responses to measures of work-family conflict at the item-level. More specifically, the work-family conflict items in question may produce different IRF results based on the defining characteristics of the group's responses, coupled with an individual's internal level of work-family conflict. Thus, the current study sought to examine the DIF of work-family conflict items by gender. Specifically, I intended to examine DIF by gender on time-based, strain-based, and behavior-based work-family conflict survey items. Based on the potential differences in perceptions of work-family conflict items, I proposed the following six research questions, in which the phrase

“given equal levels of theta,” represents the idea that two people have the exact same internal level of a given trait (e.g., work-family conflict):

- 1) Given equal levels of theta, do men and women respond differently to time-based work-family conflict items?
 - a. Do men and women who respond differently to time-based work-family conflict items do so for the same reasons?
- 2) Given equal levels of theta, do men and women respond differently to strain-based work-family conflict items?
 - a. Do men and women who respond differently to strain-based work-family conflict items do so for the same reasons?
- 3) Given equal levels of theta, do men and women respond differently to behavior-based work-family conflict items?
 - a. Do men and women who respond differently to behavior-based work-family conflict items do so for the same reasons?

As a follow up to the prior six research questions, it is additionally important to understand the proposed relationships between gender and each sub-dimensions of work-family conflict (i.e., time, strain, behavior). In line with this, it is reasonable to propose that responses to time-based, strain-based, and behavior-based work-family conflict will be influenced by whether a person is a man or a woman.

First, time-based work-family conflict may be a product of work hours, overtime, and/or the inability to disconnect from work. Williams (2013) addressed the probing question of differences in work hours by men and women. The article noted that irrespective of whether a person had children or not, men tend to work longer hours than women (with children the numbers are 29% and 9% respectively for individuals working over 50 hours per week; without children the numbers are 21% and 14% respectively). Based on these (and other) findings, it is reasonable to posit that men will interpret and respond to the time-based work-family conflict questions differently than women. Due to men's inability to spend time outside of work-related activities, I expected men to respond higher to time-based work-family conflict items than women with the same internal level of conflict. Thus, I proposed:

Hypothesis 1a: Given equal levels of theta, men will be more likely to endorse (i.e., circle a higher response option) time-based work-family conflict items.

Second, strain-based work-family conflict items will be reflected in the amount of anxiety and/or tension brought home after a difficult day at work. Several psychologists have agreed that women suffer more often from anxiety-related conditions than men. Recent research noted that, at work, women tended to respond more negatively, and with more anxiety, to risky work situations than did men (Brooks, 2014). Based on these results, it is arguable that it is also more likely that women will carry this anxiety home from work. In line with this, women and men may be likely to interpret items related to strain and anxiety differently, and more specifically women may be more sensitive to

strain-based items. I expected women to respond higher to strain-based work-family conflict items than men with the exact same level of theta. Thus I proposed:

Hypothesis 1b: Given equal levels of theta, women will be more likely to endorse (i.e., circle a higher response option) strain-based work-family conflict items.

Third, behavior-based work-family conflict will be reflected in inappropriately applied behavior in the home role stemming from the behaviors displayed at work. Women may respond to behavior-based items differently than men because, for example, women may display nurturing behaviors in the home and dominance in the workplace, whereas men may be more likely to portray dominance in both scenarios. Take, for instance, the role of a police officer. It is much more common for men to occupy the role of a police officer because the traits associated with the role or stereotypical characteristics of the group, including decisiveness and assertiveness, are often more reflective of man's behavior (Gerber, 2001). I expected men to respond higher to behavior-based work-family conflict items than women who have the same level of theta. Thus, I proposed:

Hypothesis 1c: Given equal levels of theta, men will be more likely to endorse (i.e., circle a higher response option) behavior-based work-family conflict items.

Age. For the purposes of this study, age was broken down into three categories based on frequency ranges. More specifically, age will be examined using (1) 18-30, (2) 30-45, and (3) 45+. The age categories chosen reflect basic differences in life stages. Age is an

important demographic variable to be studied within the work-family conflict literature due to the differences across generations in their perception of boundaries between work and home lives. Accordingly, the American Psychological Association (2013) states that Millennials and Gen Xers are most stressed by work, money, and job stability. In contrast, Boomers and Matures are more concerned with health for themselves and their families (American Psychological Association, 2013). For both, work and family play a role in some form but the expectations associated with both differ drastically. Interestingly, researchers realize that the way in which people “grow up and grow old” is vastly different than decades ago (Loscocco, 2000). Although an important distinction, in many work-family conflict studies, age is used as a control variable rather than examined in analyses.

Of the few studies that examine age in relation to work-family conflict, researchers have found inconsistent results between the two variables (Martins, Eddleston, & Veiga, 2002). Additionally, Mjoli, Dywili and Dodd (2013) found, in a sample of 100 female factory workers, that age is positively correlated with work-family conflict, in that, as age increases so does work-family conflict. The authors noted that individuals may conceptualize their careers differently depending on their age-related career stage. In particular, individuals in their early career are most often seen as being more open to sacrificing their personal lives in the interest of their careers. However, as individuals age, this sacrifice becomes less common as people put greater emphasis on finding a balance between work and family lives. In other words, as individuals age, they tend to put a greater priority on their family roles.

Loscocco (2000) describes work-family conflict as being faced most often by those in the middle stages of life, when role demands are at their peak. Work-family conflict may be more prevalent in different stages of a person's life and/or career due to age barriers and the lack of integration between ages at work. Huffman, Culbertson, Henning, and Goh (2013) echo this finding by reporting that age and work-family conflict share a curvilinear relationship, where the youngest and oldest workers tend to experience less interference than the middle-aged group. Alternatively, Dartey-Bahh (2015) found a negative relationship between age and work-family conflict creating a depiction of inconsistency within the results.

This pattern of findings suggests that the experience of work-family conflict differs depending on the age of the respondent. It is plausible to suggest that individuals in different stages of their lives interpret work-family conflict items differently given their life experiences and current status. Although researchers have directly examined the relationship between age and work-family conflict, they have not addressed whether individuals of different ages interpret and/or respond to work-family conflict items differently. Thus the current study sought to examine the DIF of work-family conflict items by age. Specifically, I intended to examine DIF by age on strain-based, time-based, and behavior-based work-family conflict survey items. Based on the potential differences in perceptions of work-family conflict items, I proposed the following six research questions:

- 4) Given equal levels of theta, do young, middle, and older employees respond differently to time-based work-family conflict items?

- a. Do young, middle, and older employees who respond differently to time-based work-family conflict items do so for the same reasons?
- 5) Given equal levels of theta, do young, middle, and older employees respond differently to strain-based work-family conflict items?
 - a. Do young, middle, and older employees who respond differently to strain-based work-family conflict items do so for the same reasons?
- 6) Given equal levels of theta, do young, middle, and older employees respond differently to behavior-based work-family conflict items?
 - a. Do young, middle, and older employees who respond differently to behavior-based work-family conflict items do so for the same reasons?

The prior six research questions suggest that there are age-related differences in respondent's interpretation of work-family conflict items. It is important to incorporate current literature in understanding why it is likely that each of the sub-dimensions of work-family conflict are responding to items differently based on age. Age is a plausible demographic variable to be examined in this context because as age changes over a person's lifespan, so do their resources, demands, expectations, and experiences. Based on the changes in work-family conflict over a person's lifespan, it is reasonable to propose that responses to time-based, strain-based, and behavior-based work-family conflict will create different IRF patterns by age.

First, due to time-based work-family conflict being related most closely to work hours and interference in attending events outside of work, age may contribute to the

number and kinds of events missed. Marcum (2013) found a curvilinear relationship between age and time spent in work activities. More specifically, those individuals aged 35-54 spent the most amount of time in what they termed “work production,” compared to both their younger and older counterparts. Based on these (and other) results, it is arguable that middle-aged individuals interpret the questions associated with time-based conflict differently than their younger/older counterparts. I expected middle-aged individuals to respond higher to time-based work-family conflict items than younger/older individuals with the same level of theta. Thus, I proposed:

Hypothesis 2a: Given equal levels of theta, middle-aged individuals will be more likely to endorse (i.e., circle a higher response option) time-based work-family conflict items.

Second, as noted, strain-based work-family conflict is most closely associated with anxiety or tension at work, which can be alleviated by better coping strategies. Although workers of all ages experience some form of strain (younger employees due to new roles, middle employees due to high demands, older employees due to new technologies, etc.), older employees are more likely to have refined their coping strategies, which in turn can reduce strain and allow them to adapt more effectively (Hertel, Rauschenbach, Thielgen, & Krumm, 2015). I propose that being able to cope with strain will discourage the tendency to bring the strain-related behaviors home. Thus, older workers may experience the least amount of sensitivity to the strain-based work-family conflict items compared to those who are younger, either young or middle-aged individuals. I expected young and

middle-aged individuals to respond higher to strain-based work-family conflict items than older individuals with the same level of theta. Thus I proposed:

Hypothesis 2b: Given equal levels of theta, older individuals will be less likely to endorse (i.e., circle a lower response option) strain-based work-family conflict items.

Third, behavior in one role may be ineffective in another role as described by the behavior-based sub-dimension of work-family conflict. Although stemming from the home role, Sieder, Hirschberger, Nelson, and Levenson (2010) found that older individuals used more “we”-related terms in conflict whereas middle-aged individuals used a mix of “we” and “you.” The choice of wording was associated with behaviors including satisfaction and more emotional behavior where the use of “you” had more implications for lower satisfaction and negative emotional behavior. This demonstrates that different ages tend to use different behavioral mechanisms to cope with conflict. In the work realm, researchers have addressed generational differences (Tolbize, 2008). This research has found generational differences in respect and authority attitudes, training styles and needs, work ethic, work-life balance, and leadership (Tolbize, 2008). Pertinent to this study, Baby Boomers are the most likely to sacrifice their personal lives for work whereas Generation X and Y value their work-life balance to a higher degree. These finding indicate that responses to work-family conflict questions will most likely vary depending on the generation a respondent belongs to Given this, older generations may respond higher to behavior-based work-family conflict items, whereas younger

workers may respond around the lower response options (with middle-aged falling somewhere in the middle). I expected older and middle-aged individuals to respond higher to behavior-based work-family conflict items than younger individuals with the same level of internal conflict. Thus, I proposed:

Hypothesis 2c: Given equal levels of theta, younger individuals will be less likely to endorse (i.e., circle a higher response option) behavior-based work-family conflict items.

Marital Status. In a constantly changing society where divorce rates are high and single-parents are common, marital status becomes an interesting variable to examine in understanding the work-family dynamic. For the purposes of this study, marital status was separated into two categories – (1) those who are single, and (2) those who are married. Marital status is an important variable in the work-family literature because many of the implications of interference between work and family lives have an effect on a person's spouse. Researchers often posit that those who have a spouse and children experience more work-family conflict and thus, much of the literature focuses on these individuals (Radcliffe & Vassell, 2014). This does hurt the literature at times, though, as research focused on only those individuals who are married limits the scope of heterogeneity in samples which in turn affects the generalizability of the findings. This study posits to examine single and married employees to understand if there are differences in the way these individuals interpret and respond to items based on their considerably different lifestyles.

Kossek and Ozeki (1998) note that one's marital situation may influence how one feels about managing role conflict and one's ability to use policies designed to alleviate stress from work-family interference. The research that has been conducted to date has, however, found mixed results. Byron (2005) found a weak relationship between marital status and work interference with family and found marital status to be a poor sole predictor of work-family conflict. Similarly, Allen et al. (2012) found no support for a moderating effect of marital status on the relationship between dispositional variables and work-family conflict. However, this does not mean that marital status does not affect how individuals' interpret work-family conflict items. Blau, Ferber, and Winker (1998) found that being married leads individuals to prioritize their personal lives rather than their work lives. When children are taken into account, researchers have found that single mothers experience the most work-family conflict compared to single fathers, and married couples (Nomaguchi, 2012).

Given the above results, the interpretation of whether marital status plays a major role in perceptions of work-family conflict is inconsistent. Employees may not show differences in their work-family conflict means but may still, however, interpret the items differently. It is possible that single and married employees experience work-family conflict to a similar degree but that the distribution of their responses (i.e., IRF) vary based on their marital status. The differences in item distribution have not yet, to my knowledge, been tested in regard to a person's marital status. In order to address this, the current study sought to examine the DIF of work-family conflict items by marital status. Specifically, I examined DIF by marital status on strain-based, time-based, and behavior-

based work-family conflict survey items. Based on these potential differences in perceptions of work-family conflict, I proposed the following six research questions:

- 7) Given equal levels of theta, do single, married, and previously married employees respond differently to time-based work-family conflict items?
 - a. Do single, married, and previously married employees who respond differently to time-based work-family conflict items do so for the same reasons?
- 8) Given equal levels of theta, do single, married, and previously married employees respond differently to strain-based work-family conflict items?
 - a. Do single, married, and previously married employees who respond differently to strain-based work-family conflict items do so for the same reasons?
- 9) Given equal levels of theta, do single, married, and previously married employees respond differently to behavior-based work-family conflict items?
 - a. Do single, married, and previously married employees who respond differently to behavior-based work-family conflict items do so for the same reasons?

By proposing differences in interpretation of work-family conflict items by marital status, I argue that single and married individuals face various demands and resources that contribute to their varied responses to the aforementioned items. Marital status is an important variable to be examined in relation to work-family conflict because the

individuals in each category clearly face different circumstances in both their work and home lives. For example, married men tend to make more money than their single counterparts (Ahituv & Lerman, 2005), which has implications for both roles. Thus, marital status may influence a person's perception of work-family conflict, and in turn, affect a person's interpretation of the construct items.

First, time-based work-family conflict stems from work hours and other time constraint factors from work spilling over into the home role. Within the category of "working," it has been found that married people tend to work longer than single people (DePaulo, 2014). One source notes that married men work around 400 hours more a year than single men who have the same educational achievements and come from similar economic classes (Wilcox, 2015). In light of these findings, I argue that married individuals will circle a higher response option than would single individuals on time-based work-family conflict items. I expected married individuals to respond higher to time-based work-family conflict items than single individuals with the exact same level of theta. Thus, I proposed:

Hypothesis 3a: Given equal levels of theta, married individuals will be more likely to endorse (i.e., circle a higher response option) time-based work-family conflict items.

Second, as mentioned previously, strain-based conflict is founded on the premise that strain from work may interfere with the way people cope with their emotions at home or allow anxiety from work to spill over into the home role. Vanagas, Bihari-

Axelsson and Vanagiene (2004) found that married women are the most vulnerable to job strain. Similarly, Blumenthal, Thyrum, and Siegel (1995) found that married individuals had higher blood pressure than unmarried individuals, stemming from, in part, differences in job strain. Based on these findings, it is plausible to assert that married individuals will interpret and respond differently to strain-based work-family conflict items. I expected married individuals to respond higher to strain-based work-family conflict items than single individuals with the exact same level of theta. Thus I proposed:

Hypothesis 3b: Given equal levels of theta, married individuals will be more likely to endorse (i.e., circle a higher response option) strain-based work-family conflict items.

Third, in line with the hours spent, those who work harder are more likely to display a certain set of behaviors in their work role that are more likely to spill over into their family role. It is possible then, that these behaviors will be less effective in their home role than they would be in their work role. In other words, more time spent at work influences the work-related behaviors a person displays which in turn are more difficult to “turn off” when at home (Wilcox, 2015). Thus, following the pattern of married individuals interpreting time- and strain-based work-family conflict items differently than single individuals, I argue that married individuals will also interpret behavior-based conflict differently. More specifically, I expected married individuals to be more sensitive to behavior-based work-family conflict items than single individuals with the same level of theta. Thus, I proposed:

Hypothesis 3c: Given equal levels of theta, married individuals will be more likely to endorse (i.e., circle a higher response option) behavior-based work-family conflict items.

Parental Status. For the purposes of this study, parental status was divided into two categories: (1) those who have dependent children living in their household (i.e., at least one child), and (2) those who do not. Parental status is another variable often assumed to have a great impact on work-family conflict. Parental status is important in the context of this study because the change in society's demographics creates implications for the work-home roles by changing the dynamic in which people work and raise their children. More time is being spent with children by fathers and less time by mothers than in the past, creating an increased potential for work and family demands to conflict (The Council of Economic Advisors, 2014).

As with marital status and age, parental status is most often used a control variable in work-family conflict studies (Grzywacz & Marks, 2000). Due to parental status often being treated as a control variable, researchers have not spent very much time examining the effects of being a parent on work-family conflict. At minimum, researchers have examined the relationship in samples restricted to those with children making comparison across respondents with and without children impossible. Allen and Finkelstein (2014) is an example of one study that directly addresses the parental role in relation to work-family conflict. The authors found that work-family conflict was associated with family stage, with the least amount of conflict occurring during the empty

nest stage and the most occurring when the youngest child in the home was 5 years of age or younger. Further, Martins, Eddleston, and Veiga (2002) argue that being a parent increases the importance of the family role to individuals. In line with this, they argue that employees who have children may be more likely to be dissatisfied when their work role spills over into their family role.

Although the research is limited, I posited that the associated life experiences, and in turn the interpretation of work-family conflict items, will differ based on an employee's parental status. It is reasonable to argue that those who have children will read and interpret the underlying meaning of work-family conflict items differently. For example, items relating to behaviors displayed at home may resonate more with respondents if they have others who are affected by their home behaviors. Thus, the current study sought to examine the DIF of work-family conflict items by parental status. Specifically, I examined DIF by parental status on strain-based, time-based, and behavior-based work-family conflict survey items. Based on these potential differences in perceptions of work-family conflict, I proposed the following six research questions:

- 10) Given equal levels of theta, do employees with and without children respond differently to time-based work-family conflict items?
 - a. Do employees with and without children who respond differently to time-based work-family conflict items do so for the same reasons?
- 11) Given equal levels of theta, do employees with and without children respond differently to strain-based work-family conflict items?
 - a. Do employees with and without children who respond differently to

strain-based work-family conflict items do so for the same reasons?

12) Given equal levels of theta, do employees with and without children respond

differently to behavior-based work-family conflict items?

a. Do employees with and without children who respond differently to behavior-based work-family conflict items do so for the same reasons?

The prior six research questions focus on whether there are parent/nonparent-related differences in respondents' interpretation of work-family conflict items. It is important to understand why respondents may answer items differently based on parental status for each of the sub-dimensions of work-family conflict. Parental status is a plausible demographic to be examined in this context because, as noted previously, the addition of children into a person's life will make them less likely to make sacrifices in the home role and more likely to make sacrifices the work role (e.g., will not work late because they have a child's football game). With these shifting priorities, it is reasonable to propose that responses to time-based, strain-based, and behavior-based work-family conflict will create different patterns across parental status.

First, time-based conflict is best understood as interference due to time-related limitations. Williams (2013) examined the amount of time spent at work by those who have children and those who do not. For men, fathers who live with their children work more hours than those who do not have any children. However, the reverse is true for women. In many instances, if flexibility is not an option, women with children end up needing to either sacrifice their career or their children (Williams, 2013). If flexibility is

an option, childless employees tend to get stuck with the last minute business trip, meetings, holidays, etc. The stigma around a nonparent's nonwork schedule can be misleading. Although both those with children and those without may face undesirable circumstances pertaining to time-based work-family conflict, I argue that because children are so reliant on their parent's presence, parents responding to the items will be more likely to choose a higher response option. It will most likely be easier for a parent to remember the field trip they missed or their sick child, than the nonparents change in schedule. I expected parents to respond higher to time-based work-family conflict items than nonparents with the same level of internal conflict. Thus, I proposed:

Hypothesis 4a: Given equal levels of theta, parents will be more likely to endorse (i.e., circle a higher response option) time-based work-family conflict items.

Second, strain-based conflict is derived from anxiety and tension spilling over from the work to the home role. The American Psychological Association (APA; 2015) reports that parents (versus nonparents) tend to experience higher levels of stress. Specifically in areas pertaining to irritability/anger, nervousness, and feelings of being overwhelmed, parents are facing more stress than nonparents. To further the burden, it seems those who have children also struggle to find emotional support. It is not clear whether this stress is derived in full from the work or home role, but it is safe to say that high stress by parents likely influences their behavior with their children. In support of this, APA (2015) notes that nearly half of parents (49 percent) say they have lost patience with their children when they were feeling stressed. I propose that parents may be more sensitive to strain-

based work-family conflict than a nonparent. I expect parents to respond higher to strain-based work-family conflict items than nonparents with the same level of theta. Thus I propose:

Hypothesis 4b: Given equal levels of theta, parents will be more likely to endorse (i.e., circle a higher response option) strain-based work-family conflict items.

Third, behavior-related inconsistencies between the work and home roles will create what is known as behavior-based work-family conflict. The aggressive, assertive, confident stance required to be successful in the professional world today (Rigoglioso, 2011), may turn out to be highly ineffective in a person's home role. For example, a mother who must push others at work and create an emotionless persona around colleagues may cause undue harm to her children who seek nurturing experiences with their mother. I make a similar argument here as I did in the marital status section, in that the work-related behaviors a person displays will be more difficult to "turn off" when at home, in turn, influencing the way a person interact with their family members (Wilcox, 2015). Thus, I argue that those employees with children will experience behavior-based conflict differently than non-parents which will influence their interpretation of the presented items. I expected parents to respond higher to behavior-based work-family conflict items than nonparents with the same level of conflict. Thus, I propose:

Hypothesis 4c: Given equal levels of theta, parents will be more likely to endorse (i.e., circle a higher response option) behavior-based work-family conflict items.

CHAPTER EIGHT

SUMMARY OF HYPOTHESES

Gender

Research Questions

- 1) Given equal levels of theta, do men and women respond differently to time-based work-family conflict items?
 - a. Do men and women who respond differently to time-based work-family conflict items do so for the same reasons?
- 2) Given equal levels of theta, do men and women respond differently to strain-based work-family conflict items?
 - a. Do men and women who respond differently to strain-based work-family conflict items do so for the same reasons?
- 3) Given equal levels of theta, do men and women respond differently to behavior-based work-family conflict items?
 - a. Do men and women who respond differently to behavior-based work-family conflict items do so for the same reasons?

Hypotheses

Hypothesis 1a: Given equal levels of theta, men will be more likely to endorse (i.e., circle a higher response option) time-based work-family conflict items.

Hypothesis 1b: Given equal levels of theta, women will be more likely to endorse (i.e., circle a higher response option) strain-based work-family conflict items.

Hypothesis 1c: Given equal levels of theta, men will be more likely to endorse (i.e., circle a higher response option) behavior-based work-family conflict items.

Age

Research Questions

- 4) Given equal levels of theta, do young, middle, and older employees respond differently to time-based work-family conflict items?
 - a. Do young, middle, and older employees who respond differently to time-based work-family conflict items do so for the same reasons?
- 5) Given equal levels of theta, do young, middle, and older employees respond differently to strain-based work-family conflict items?
 - a. Do young, middle, and older employees who respond differently to strain-based work-family conflict items do so for the same reasons?
- 6) Given equal levels of theta, do young, middle, and older employees respond differently to behavior-based work-family conflict items?
 - a. Do young, middle, and older employees who respond differently to behavior-based work-family conflict items do so for the same reasons?

Hypotheses

Hypothesis 2a: Given equal levels of theta, middle-aged individuals will be more likely to endorse (i.e., circle a higher response option) time-based work-family conflict items.

Hypothesis 2b: Given equal levels of theta, older individuals will be less

likely to endorse (i.e., circle a higher response option) strain-based work-family conflict items.

Hypothesis 2c: Given equal levels of theta, younger individuals will be less likely to endorse (i.e., circle a higher response option) behavior-based work-family conflict items.

Marital Status

Research Questions

- 7) Given equal levels of theta, do single, married, and previously married employees respond differently to time-based work-family conflict items?
 - a. Do single, married, and previously married employees who respond differently to time-based work-family conflict items do so for the same reasons?
- 8) Given equal levels of theta, do single, married, and previously married employees respond differently to strain-based work-family conflict items?
 - a. Do single, married, and previously married employees who respond differently to strain-based work-family conflict items do so for the same reasons?
- 9) Given equal levels of theta, do single, married, and previously married employees respond differently to behavior-based work-family conflict items?
 - a. Do single, married, and previously married employees who respond differently to behavior-based work-family conflict items do so for the same reasons?

Hypotheses

Hypothesis 3a: Given equal levels of theta, married individuals will be more likely to endorse (i.e., circle a higher response option) time-based work-family conflict items.

Hypothesis 3b: Given equal levels of theta, married individuals will be more likely to endorse (i.e., circle a higher response option) strain-based work-family conflict items.

Hypothesis 3c: Given equal levels of theta, married individuals will be more likely to endorse (i.e., circle a higher response option) behavior-based work-family conflict items.

Parental Status

Research Questions

10) Given equal levels of theta, do employees with and without children respond differently to time-based work-family conflict items?

a. Do employees with and without children who respond differently to time-based work-family conflict items do so for the same reasons?

11) Given equal levels of theta, do employees with and without children respond differently to strain-based work-family conflict items?

a. Do employees with and without children who respond differently to strain-based work-family conflict items do so for the same reasons?

12) Given equal levels of theta, do employees with and without children respond differently to behavior-based work-family conflict items?

- a. Do employees with and without children who respond differently to behavior-based work-family conflict items do so for the same reasons?

Hypotheses

Hypothesis 4a: Given equal levels of theta, parents will be more likely to endorse (i.e., circle a higher response option) time-based work-family conflict items.

Hypothesis 4b: Given equal levels of theta, parents will be more likely to endorse (i.e., circle a higher response option) strain-based work-family conflict items.

Hypothesis 4c: Given equal levels of theta, parents will be more likely to endorse (i.e., circle a higher response option) behavior-based work-family conflict items.

CHAPTER NINE

METHOD

Participants

The current study used data collected through an online website – Amazon’s Mechanical Turk (MTurk). The sample size for the study was 681 adult employees. The sample was majority women (59.0%), who were married or in a domestic partnership (52.8%), with no children (59.2%). The employees in the sample were mainly employed full time (79.7%), with one job (73.8%), and ranged in age from 18 to 71+.

MTurk is a relatively new online marketplace designed to conduct research that facilitates several parts of the research process including a participant compensation, large participant pool recruitment, streamlined process of study design, and data collection. The MTurk workforce is demographically diverse and large, estimated to include over 100,000 workers (Buhrmester, Kwang & Gosling, 2011). Participants of MTurk, “Workers,” sign up for the MTurk website and fill out surveys that “Requesters” have posted. They may need to meet specific criteria established by the researchers to participate in each survey and are rewarded compensation based on their performance.

MTurk has become increasingly common in social science research over the past few years. Several studies have used MTurk to examine its effectiveness compared to other traditional methods. In an examination of MTurk, Buhrmester et al., (2011) found MTurk participants are more demographically diverse than a standard Internet sample (noncommercial, advertisement free web site drawing participants to complete

questionnaires on personality measures, quizzes, games, etc.) and significantly more diverse than a college sample. MTurk participants can be recruited rapidly and inexpensively. Even at low compensation rates, data quality does not seem to be affected. Lastly, the data obtained are at least as reliable as the data obtained using traditional methods (Buhrmester et al., 2011).

Casler, Bickel, and Hackett (2013) tested three distinct groups: an online sample from MTurk, a college sample, and a sample recruited from social media. Results indicated that MTurk participants were more ethnically and socio-economically diverse. However, test results were almost identical across the three groups. The researchers concluded that data collected online for behavior tests is equivalent, and may even be superior, to face-to-face data collection, in that, online participants were not found to be less motivated or less invested than a face-to-face sample.

Lastly, Johnson and Borden (2012) found similar results when comparing a MTurk sample and a traditional laboratory based sample. The purpose of this study was to identify a way to increase student faculty research collaboration and concluded that MTurk provided a more than sufficient pathway to do so. The researchers found that Mturk showed comparable reliability and similar gender and ethnic composition to data gathered in a typical laboratory setting. However, MTurk users were approximately 10 years older and produced higher scores on a few trait/state measures.

To sum, the use of MTurk has become increasingly popular in psychological research, and more specifically in Industrial-Organizational research. If the correct

precautions are used, MTurk can be a valuable, high-quality form of data collection. Based on the characteristics of MTurk Workers, using the MTurk website allowed me to collect a wide range of demographics within my sample and still gain quality data.

Procedure

Design. The current study was approved by Clemson IRB and Indiana University-Purdue University Indianapolis IRB prior to survey distribution. Surveys were administered to employed members of the MTurk website in two waves of data collection with a time lag of three months. The variables used for the current study were part of a larger study designed to assess income, workplace behaviors, and health. All data used for the purposes of the current study were collected at Wave 2 including demographics.

Each survey was posted on the MTurk website and open to MTurk Workers. In order to gain access to each survey, participants needed to be employed in the U.S. and needed an approval rating over 90%. When a participant is approved (or rejected) it affects their MTurk rating. Approval is given once a survey is successfully completed. Rejection occurs if a participant does not successfully complete the survey. Thus, for my survey only participants who had successfully been approved for 90% of the previous surveys they had completed will have access to my survey.

Once a participant gained access to the survey they answered several questions pertaining to the workplace and their behaviors. Within these measures, there were four attention check items. If a participant failed any of the attention check items they were prompted to either start the survey from the beginning or to end the survey at that time

and not receive compensation. After successful completion of the survey, participants were messaged a link through the MTurk website containing the directions for Wave 2. Wave 2 had similar questions to Wave 1 and also included similar attention check items.

It is important to note, I used portions of the data for my master's thesis (Burns, 2013) in which I examined the relationship between income, work-family conflict, and four mediator variables which included childcare satisfaction, benefits, leave, and social capital. The work-family conflict items are the only portion of the prior study that will be examined a second time in the current study. The purpose of the prior study was to test a model based on income and associated resources that predicted work-family conflict. The current study is vastly different in that it does not use a model-testing approach nor does it have a large amount of overlap in the items examined. The purpose of the current study is to examine the work-family conflict scale at an item level, making the theoretical and practical implications of the current study profoundly different than the former study.

Compensation. Participants who completed Wave 1 surveys received \$4. Similarly, participants who completed Wave 2 surveys received \$4.

Measures

The measures used in the present study are described below. The full list of measures used in this study can be found in Appendix A.

Demographic Variables

Gender. Gender was assessed using one item. The gender item was “What is your gender?” Response options included “male” (41.0%), “female” (59.0%), and “other” (0%). For the purposes of this study, two of the three response options – “male” and “female” – were used for analyses.

Age. Age was assessed using one item. The age item was “What is your age?” Respondents were given the option to choose from a drop-down ranging from “18-70+” menu or to manually enter their age into an open-ended box. Age categories were based on frequencies. In order to run a sound DIF analyses, the groups need to be relatively equal. Thus, I based the groups on comparable sizes, and altered them to reflect different life stages. The groups produced included “young” (18-30; 35.5%), “middle” (30-45; 43.3%), and “old” (45+; 22.2%). Although 30-45 may not reflect the definition of middle-aged persons by society’s terms, the middle-aged group here reflects those in the mid-range of ages based on frequencies.

Marital Status. Marital status was assessed using one item. The marital status item was “What is your current marital status?” Respondents were given five options which included “single” (37.0%), “married” (52.9%), “divorced” (7.0%), “separated” (1.7%), and “widowed” (1.3%). For the purposes of the current study, only the first two response options – married and single – were used for analyses.

Parental Status. Parental status was assessed using one item. The parental status item was “How many dependent children do you have in your household?” Responses

options ranged between “0” and “6+.” For the purposes of the current study, the analyses were group into two categories – those who have children (response options “1” – “6+”; 59.2%) and those who do not (response option “0”; 40.8%).

Work-family Conflict. A commonly used 9-item scale developed by Carlson et al. (2000) was used to gauge individuals’ perceptions of their work-family conflict. All three forms of work-family conflict were assessed: time, strain, and behavior. Participants were asked to “Please rate the degree to which you feel that you experience conflict represented in each of the items. Note: “Family” can be defined as persons related by biological ties, marriage, social custom or adoption, including both immediate and extended family members (e.g., spouse, parent, child, sibling, in-law, and so forth).” Ratings were on a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7). Higher scores indicated higher levels of conflict between one’s work and family lives. An example of a time-based work-family conflict is item was “I have to miss family activities due to the amount of time I must spend on work responsibilities.” The reliability of the time-based WFC scale was .93, the reliability of the strain-based WFC scale was .92, and the reliability of the behavior-based conflict scale was .85. The overall Cronbach’s alpha for the work-family conflict scale was .91.

Additionally, qualitative data were collected on three of the nine work-family conflict items. I choose to only include three of the nine items due to time constraints on the survey. Each sub dimension of work-family conflict was assessed using one qualitative item. The qualitative questions read “We are looking to find out more about

why you answered the way that you did. In the box below, please explain why you choose the response option that you did to the question "XXXX." The questions used in the qualitative section were "My work keeps me from my family activities more than I would like," "I am often so emotionally drained when I get home from work that it prevents me from contributing to my family," and "Behavior that is effective and necessary for me at work would be counterproductive at home" for time-, strain-, and behavior-based items, respectively.

As noted, the scale used for the purposes of the paper was the Carlson et al. (2000) scale. The work-family conflict scale is a self-report measure that was developed to assess work-family conflict across six dimensions. Carlson et al. (2000) tested the dimensionality of the items within the scale using Confirmatory Factor Analysis (CFA), the reliability was established with coefficient alpha, and the discriminate validity was examined with Structural Equation Modeling (SEM). Dimensionality analyses supported a six-factor model of work-family conflict, which included work-interference with family (WIF) time-based, WIF strain-based, WIF behavior-based, family-interference with work (FIW) time-based, FIW strain-based, and FIW behavior based. Reliabilities were as follows: time-based WIF = .87; time-based FIW = .79; strain- based WIF = .85; strain-based FIW = .87; behavior-based WIF = .78; behavior- based FIW = .85. Additionally, discriminate validity was supported. There is sufficient validation evidence of the Carlson et al. (2000) work-family conflict scale. The scale is well established and has been validated using job satisfaction, life satisfaction, family satisfaction and organizational commitment outcomes.

Carlson and colleagues (2000) also assessed differences between genders within the created scale. They found that women and men may experience work-family conflict differently, especially for family interference with work. More specifically, four of the six dimensions examined showed significant differences between genders such that women experienced more conflict than men on all three family interference with work dimensions and also on strain-based work interference with family. The authors posited that the results may be explained by the fact that women experience more conflict than men on only some of the conflict scales, not all. Carlson et al., (2000) also found evidence for structural equivalence of their measure of work-family interference in samples split by gender; however, no information exists about potential gender differences at the item level.

CHAPTER TEN

RESULTS

Mixed-methods research was the methodological framework used to guide the current study. Thus, the analyses for the current study were conducted using a multi-method approach. The first set of analyses – quantitative – examined the demographic variables and their influence on the interpretation of and responses to work-family conflict items using DIF. I used the Carlson et al. (2000) scale to show differences in IRFs by demographic group. The second set of analyses – qualitative – was a follow-up to the DIF analyses and consisted of coding and comparing responses by demographic variables. By coding responses based on themes, the in-depth qualitative approach allowed me to explain and expand the quantitative results by further investigating demographic differences. The qualitative section of the current study was guided by a thematic framework, which is best defined as a method for identifying, analyzing, and reporting patterns (themes) within data.

Prior to any analyses, the data were screened for outliers, consistency within results, people who took an abnormally low (or high) amount of time to complete the survey, or failed an attention check item resulting in a final sample of 681. Once the data were screened, IBM SPSS Statistics was used to test the demographic variables and determine the compositional make-up of the final sample (see Table 5a). Means, standard deviations, and correlations were run for the work-family conflict items (see Table 5b). Listwise deletion was used. The removal of cases was based on missing data such that an entire record was excluded from analysis if any single value was missing.

In order to verify that a three-factor model was, in fact, the best fitting model using the current dataset, two CFAs were run on the data including a one-factor model (Figure 4a) and a three-factor model (Figure 4b). The three-factor model represented the three forms of work-family conflict – time, strain and, behavior. The one-factor model represented a general work-family conflict collapsed across all nine items. Table 4 presents the X^2 , comparative fit statistic (CFI), and root-mean-square error of approximation for the two models (RMSEA). As shown, a three-factor model is the best fitting model ($\chi^2 = 77.19$, CFI = .988, RMSEA = .061); however, there is sufficient support for running the data as one measure for the purpose of IRT. The standardized factor loadings for each of the nine items are in Figure 4b.

Part One, Item Response Theory. IRT functions under two basic assumptions which are that item responses are unidimensional and locally independent. Unidimensionality implies that a set of items assesses a single underlying trait dimension and thus, ensures that the items measures only one construct (Reise, Widman & Pugh, 1993). This is a critical assumption that must be met prior to any IRT analyses. The items examined must have a reference point created by the remaining work-family conflict items and this cannot be achieved without a sufficient number of items that are unidimensional. Due to the high Cronbach's alpha on the work-family conflict scale, it was not necessary to run a test of unidimensionality such that unidimensionality must be met in order to have reliability. Thus, by terms of logic, unidimensionality must be met if reliability exists. Due to my measure being relative short, no obvious competing constructs exist, and the

high alpha, the evidence suggests unidimensionality. Local independence means that if theta is held constant statistically, then the test items are pairwise uncorrelated such that the item responses are independent of each other given a subject's latent trait value. As long as unidimensionality is met, so is local independence. PARSCALE and IRTPRO software were used for the following analyses as described below.

Total Information Curve. Prior to the item-level analyses, IRTPRO was used to test the entire scale functioning, the items as a complete scale, and whether the whole scale was being utilized (i.e., test information curve). As the name implies, information is how much reduction in uncertainty about a person's theta (i.e., conflict level) you can get from their answer to an item. As with many Likert-type scales, the total information curve provided the most information at moderate levels of theta (see Figure 5). In lay terms, this means that the scale tells the most about the measure for those individuals who at least have some level of work-family conflict up through those who have a sufficient amount of conflict, but not those with the highest levels of conflict (i.e., $\theta = -1 - 2$). Less information is provided for those individuals on the ends of the theta scale (i.e., $\theta = -3, 3$), or those who have either no conflict or a lot of conflict.

To be more specific in identifying which items provide the most information, I examined the information analyses for each item (see Table 6). The graphs provide insight into which individual items provide the most information or are the best at predicting a person's level of conflict. As seen in Figure 6, items 1-3 provide a moderate level of information, items 4-6 provide a great amount of information, and items 7-9

provide little information. Interestingly, the level of information provided by the items is reflective of their work-family conflict subdimension. In other words, strain-based work-family conflict items provide the most information (items 4-6), time-based work-family conflict items provide the next highest amount of information (items 1-3), and behavior-based work-family conflict items provide the least amount of information (items 7-9).

Differential Item Functioning Analyses. Following the total information analysis, PARSCALE was used to address all research questions and hypotheses 1a-4c. PARSCALE used the graded response model (GRM) to estimate the two item parameters – difficulty and discrimination. The GRM can be used in situations where polytomous item responses are assumed to represent ordered categories (Samejima, 1997), making it appropriate for use with the previously developed Carlson et al. (2000) scale. Each work-family conflict item (9 in total, 3 per sub dimension) was used and examined separately. Each item was tested separately by the identified demographic variables – gender, age, marital status, parental status.

The DIF output allowed for information to be gathered about the items in a scale, their individual and interactive functioning, and also helped to understand the response patterns of survey-takers. The DIF outputs of primary interest in the current study were theta, the discrimination parameter (a), the difficulty parameter (b), and the produced IRFs. As previously discussed, theta is a function of an individual's response patterns as well as the properties of the items themselves and reflects a person's underlying level of a

trait (e.g., conflict). Theta is used to estimate an individual's standing on the latent trait of interest, in this case their perception of work-family conflict.

The a (item discrimination parameter) and b (item difficulty parameter) parameters were examined in accordance with the output. I will reiterate briefly the functions of the two-parameter model. The purpose of the difficulty and discrimination parameter can vary depending on the type of model being examined. In a polytomous IRT model, the slope of the response function at various points of theta is represented by the discrimination parameter (a). Additionally, the a parameter will indicate how accurately an item can differentiate between those at higher and lower levels of theta such that positive values indicate more discriminating items. In line with this, large discrimination parameters are deemed more desirable. The position of the IRF graph is represented by the difficulty parameter (b). The position of the graph indicates what level of theta must be obtained before someone is likely to endorse the next response option.

The amount of information that an item provides across the continuum of theta can be graphed to create IRFs. The IRFs produced through the analyses were examined for differences and/or trends by demographics. The development of IRFs made it possible to determine the value(s) of theta for which an item is maximally predictive, and if and where any differences in the likelihood of a response given the same level of theta were found between demographic groups.

The following sections regarding the demographic variable DIF analyses will address (1) research questions, (2) hypotheses, (3) significance, and (4) specific items.

The results produced may have shown differences in demographics that did not necessarily reflect the research questions or hypotheses. In other words, individual items may have shown differences while the remaining items in that subdimension did not. Given that exploratory nature of this study, all results are considered beneficial to understanding work-family conflict and will be reported. Additionally, significance will be reported for those items that reflect significant differences but should not be the only indication of differences. Significance will be determined by using the chi-square of slope contrasts produced as part of the PARSCALE DIF analysis. The significance test used was the Wald chi-square statistic. Much of IRT research is visual based, such that graph patterns may be more indicative of differences than simply significance. There may be a significant finding that lacks practical application or the finding may be too small to have any impact on the meaning (i.e., inconsequential findings). The DIF visual differences produced speak to the impact of the item on research and practice. Prior to any action taken on the elimination or modification of items, it is important to have both significant differences and substantive difference.

Gender. Gender was examined using all nine work-family conflict items (see Tables 6a-6c; Figures 7a-7i). The items that reflected visual differences, in that, the graphs produced were different by gender based on difficulty and discrimination (i.e., location and slope) were Item 1 (slight), Item 4, Item 6, Item 7 (slight), Item 8, Item 9. Item 4 reflected a pattern in which the level of theta altered whether men or women responded higher, termed non-uniform DIF. Specifically, at lower levels of theta (less

conflict), men tended to circle a higher response option, and alternatively, and higher levels of theta (more conflict), women tended to circle a higher response option. Item 6 followed a similar pattern to Item 4. Item 8 reflected the opposite, such that at low levels of theta (less conflict), women were more likely to respond higher, and at high levels of theta (high conflict), men were more likely to circle a higher response option. Lastly, Item 9 followed a similar slope for both men and women, but the location differed such that women were more likely to respond higher regardless of their internal level of conflict. In sum, a subset of the items reflect DIF by gender. Specifically, strain- and behavior-based items demonstrate differences more often than time-based work-family conflict items. Thus, strain- and behavior-based items should be further evaluated for differences in regard to gender.

Results informing research questions (RQ) 1-3 are described in the above descriptions. RQ1 addressed differences by gender for time-based work-family conflict items. The findings address RQ1 by showing that DIF was not present for time-based work-family conflict (Item 1, men = 1.54 (*a*), 0.60 (*b*), women = 1.42 (*a*), 0.72 (*b*); Item 2, men = 1.45 (*a*), 0.76 (*b*), women = 1.45 (*a*), 0.79 (*b*); Item 3, men = 1.34 (*a*), 0.74 (*b*), women = 1.32 (*a*), 0.79 (*b*)). As described, only one of three items – Item 1 – demonstrated even slight differences in responses, where men endorsed higher response options across the entirety of the theta scale. Alternatively, the findings that address RQ2 showed that some differences did exist between men and women, such that Item 4 and Item 6 both reflected differences in responses by gender (Item 4, men = 1.12 (*a*), 0.74 (*b*), women = 1.49 (*a*), 0.69 (*b*); Item 5, men = 1.31 (*a*), 0.81 (*b*), women = 1.35 (*a*), 0.75 (*b*);

Item 6, men = 0.98 (*a*), 0.67 (*b*), women = 1.34 (*a*), 0.64 (*b*)). Similarly, the findings that addressed RQ3 provided evidence that some differences existed between men and women, such that Item 8 and Item 9 both reflected differences by gender (Item 7, men = 0.40 (*a*), 0.78 (*b*), women = 0.45 (*a*), 0.76 (*b*); Item 8, men = 0.57 (*a*), 0.51 (*b*), women = 0.32 (*a*), 1.01 (*b*); Item 9, men = 0.33 (*a*), 1.02 (*b*), women = 0.31 (*a*), 0.39 (*b*)). Gender differences are shown, however, the patterns produced by men and women differ and are to be addressed in the hypothesis section that follows.

Hypotheses 1a-1c concern the gender DIF tests. Hypothesis 1a, proposing that men, with a comparable level of conflict to a woman, will be more likely to circle a higher time-based work-family conflict response option. Although one of the three graphs produced reflected this difference, the difference was minute, and the hypothesis was not supported. Hypothesis 1b, proposing that women will circle a higher response option given the same level of theta as men for strain-based items, was partially supported. Women were more likely to circle a higher response option for at least half of the theta scale for all three strain-based work-family conflict items. This means that with equal levels of internal conflict, women were more likely to circle a higher response compared to men, especially for those who feel they have higher levels of conflict. Hypothesis 1c, which proposed that men would be more likely to circle a higher response option than women who had the same level of conflict for behavior-based items, was not supported. Although differences were shown between the items, the specific graphical patterns were highly inconsistent in that women or men may be more likely to endorse a behavior-

based work-family conflict item depending on the item in question; thus, it was not supported than men would be more likely to circle a higher response option.

For gender differences in work-family conflict items, significant differences were found for two of the nine items. Specifically, Item 6 (strain-based) and Item 8 (behavior-based) showed significant differences ($\chi^2 = 4.06$, $df = 1$, $p < .05$; $\chi^2 = 26.44$, $df = 1$, $p < .001$). As previously mentioned, Item 6 (strain-based) reflected a pattern such that (with equal levels of theta) men were more likely to endorse a higher response option at lower levels of theta, and women at higher levels. Item 8 (behavior-based) reflected the opposite such that at low levels of internal conflict, women were more likely to endorse a higher response option, and at higher levels men were more likely to endorse a higher response option. The significance for the strain-based and behavior-based item provide additional support for the research questions and hypotheses. In sum, there is some moderate non-uniform DIF findings for gender, mainly for strain- and behavior-based items.

An additional conclusion that can be drawn from the significance is that two people who rate a “2”, for instance, actually have different levels of internal conflict. In Item 6, a man and woman who both rate a “2”, have a different theta level meaning that a man who rates a 2 have less internal conflict than a woman who rates a “2”. Thus, a “2” rating (among other ratings) is inconsistent in the level of conflict needed to answer that response option. The same conclusion can be drawn from Item 8, however, the direction is reversed such that a man who rates a “2” have more internal conflict than a woman who rates a “2.”

Age. Age was examined using all nine work-family conflict items (see Tables 7a-7f; Figures 8a-8r). For analyses, middle-aged persons were compared to old persons and middle-aged persons were compared to young persons. I will discuss each separately but consecutively in the following sections. Visually, the old to middle-aged comparisons, showed differences for five of the nine items being Item 3, Item 6, Item 7, Item 8, and Item 9. Item 3 showed differences such that older individuals were more likely to circle a higher response option for the majority of the theta scale. Item 6 produced differences that reflected a higher probability of response option for older individuals at the higher end of the scale (given equal levels of theta), and lower probability for older individuals at the lower end of the theta scale. The alternating pattern found here is reflective of non-uniform DIF. Item 7's differences were supportive of older individuals responding with a higher response option across the entirety of the theta scale. However, Item 7 and Item 9 were more reflective of the opposite where middle-aged individuals were more likely to respond with a higher response option, given equal levels of theta, as compared to older individuals.

Moreover, the young to middle-aged comparisons were found to have visual differences for eight of the nine items. Included are all items except Item 1. Item 2 produced differences such that younger individuals were more likely to endorse a higher response option, given equal levels of internal conflict, as compared to middle-aged individuals. Item 3 was similar to Item 2, however at high levels of theta, Item 3 reversed and middle-aged individuals became more likely to endorse a higher response option given the same level of theta. Item 4 was supportive of differences such that younger

individuals were more likely to endorse a higher response option, especially at high levels of theta. Item 5 was similar to Item 4 with the exception that at low levels of theta, middle-aged individuals were more likely to endorse a higher response option as compared to young individuals. Item 6 was comparable to the pattern produced in Item 2. Item 7 reflected the opposite of Items 2 and 6, such that middle-aged individuals were more likely to endorse a higher response option across the entirety of the theta scale given the same level of theta as, and in comparison to, young persons. The final two items – Item 8 and Item 9 – reflected opposing patterns, such that in both a switch occurred but in Item 8, middle-aged individuals were more likely to circle a higher response option at higher levels of theta whereas in Item 9, younger individuals were more likely to circle a higher response option at higher levels of theta. In sum, for both comparisons (middle-old and young-middle), behavior-based item differences by age existed for all three items. Thus, the behavior-based items produced the most substantial DIF by age, followed by the strain-based items, and then the time-based items.

Answers to research questions (RQ) 4-6 are addressed in the above descriptions. RQ4, which proposed differences by age for time-based work-family conflict items, was addressed through findings that indicated some differences by age (Item 1, young = 0.90 (*a*), 0.44 (*b*), middle = 0.96 (*a*), 0.51 (*b*); Item 2, young = 0.93 (*a*), 0.49 (*b*), middle = 1.03 (*a*), 0.76 (*b*); Item 3, young = 0.74 (*a*), 0.60 (*b*), middle = 0.90 (*a*), 0.72 (*b*); Item 1, middle = 1.18 (*a*), 0.84 (*b*), old = 1.09 (*a*), 0.76 (*b*); Item 2, middle = 1.34 (*a*), 1.01 (*b*), old = 1.25 (*a*), 0.87 (*b*); Item 3, middle = 1.12 (*a*), 0.99 (*b*), old = 1.50 (*a*), 0.77 (*b*)). Approximately half of the produced time-based graphs reflected age differences

individuals' interpretation of work-family conflict items. The findings address RQ5 by showing DIF for different ages, such that differences in strain-based work-family conflict items were found for the majority of the related items (Item 4, young = 0.91 (*a*), 0.44 (*b*), middle = 0.96 (*a*), 0.51 (*b*); Item 5, young = 0.93 (*a*), 0.49 (*b*), middle = 1.03 (*a*), 0.76 (*b*); Item 6, young = 0.74 (*a*), 0.60 (*b*), middle = 0.90 (*a*), 0.72 (*b*); Item 4, middle = 1.02 (*a*), 0.92 (*b*), old = 1.05 (*a*), 0.81 (*b*); Item 5, middle = 1.00 (*a*), 0.99 (*b*), old = 0.84 (*a*), 0.93 (*b*); Item 6, middle = 1.08 (*a*), 0.86 (*b*), old = 1.50 (*a*), 0.86 (*b*)). RQ6 anticipated differences between behavior-based work-family conflict items by age. Evidence showed that differences existed, such that all of the items showed visual differences between young, middle, and older individuals (Item 7, young = 0.27 (*a*), 0.98 (*b*), middle = 0.24 (*a*), 0.67 (*b*); Item 8, young = 0.21 (*a*), 0.90 (*b*), middle = 0.35 (*a*), 0.10 (*b*); Item 9, young = 0.26 (*a*), 0.29 (*b*), middle = 0.19 (*a*), 0.40 (*b*); Item 7, middle = 0.30 (*a*), 1.00 (*b*), old = 0.29 (*a*), 0.53 (*b*); Item 8, middle = 0.43 (*a*), 0.56 (*b*), old = 0.28 (*a*), 1.41 (*b*); Item 9, middle = 0.25 (*a*), 0.04 (*b*), old = 0.28 (*a*), 1.02 (*b*)). Although differences are shown, the patterns produced may differ and are to be addressed in the hypothesis section that follows.

Hypotheses 2a-2c are relevant to the age DIF results. Hypothesis 2a, hypothesized that middle-aged individuals would be the most likely, as compared to young and old individuals, to endorse time-based work-family conflict items. Hypothesis 2a was not supported. Hypothesis 2b, which proposed that older individuals would be less likely, given equal levels of theta, to endorse strain-based work family conflict as compared to middle-aged and young individuals, was not supported. Lastly, Hypothesis 2c was not

supported such that younger individuals were not less likely to endorse behavior-based work-family conflict items as compared to middle-aged and older individuals with the same level of internal conflict.

Of all 18 analyses run for the age category, only two items (in one category) were significant. More specifically, no significant differences were found between the middle-aged and old-aged groups. Item 8 and Item 9 ($\chi^2 = 5.09$, $df = 1$, $p < .05$; $\chi^2 = 2.80$, $df = 1$, $p < .10$), were significant for the differences between middle-aged and young persons, where Item 9 was only marginally significant. As for the one significant item – Item 8 – the results produced reflected a pattern in which, given equal levels of theta, younger individuals were more likely to circle a higher response option at low theta levels (theta = -3.0 - -1.0) and middle-aged individuals were more likely to circle a higher response option at high theta levels (theta = -1.0+). Following this, although visual differences existed in all three of the age-related item analyses (in support of research questions), significant differences were only noted for the behavior-based subdimension. Thus, although visual differences existed, the lack of significance does not aid in support of deletion or modification of the time- or strain-based items. To sum, the middle to old group, did not show any DIF, and the young to middle group showed mild non-uniform DIF, mainly for behavior-based differences.

Marital Status. Marital status was examined using all nine work-family conflict items (see Tables 8a-8c; Figures 9a-9i). Eight of the nine items produced graphs, based on difficulty and discrimination (i.e., location and slope), that were visually different. The

exception was Item 4. Item 1 produced a pattern where married individuals scored higher than single individuals across the theta spectrum. Item 2 and Item 3 reflected opposing patterns but both produced non-uniform DIF, such that (given equal levels of theta) at low levels of theta married individuals scored higher and at high levels of theta single individuals scored higher for Item 2 whereas for Item 3, married individuals scored higher at high levels of theta and single individuals at low levels. Item 5 reflected a similar, but less drastic, response pattern as Item 2. Item 6 was similar to Item 3, however the difficulty (i.e., location) of the graph, specifically for single individuals, was shifted left producing a larger gap between married and single individuals towards the low-middle theta levels. Married individuals scored higher across the theta spectrum as compared to single individuals for Item 7. Item 8, also a non-uniform DIF graph, switched between single and married individuals scoring higher given equal levels of theta, however, married individuals tended to be higher for the majority of the theta scale (and at the higher end). Lastly, Item 9 reflected single individuals scoring higher, given the same level of theta, than married individuals. In sum, all of the time-, strain-, and behavior-based items are relatively supportive of DIF, except Item 4 (strain-based). Given that several of the items are producing DIF by marital status, further investigation is important in regards to this variable.

Answers to research questions (RQ) 7-9 are provided in the above descriptions. The findings addressed RQ7 by demonstrating differences in all items, such that the time-based work-family conflict graphs produced displayed differences between married and single persons (Item 1, married = 0.92 (*a*), 0.60 (*b*), single = 1.06 (*a*), 0.79 (*b*); Item 2,

married = 0.93 (*a*), 0.78 (*b*), single = 1.25 (*a*), 0.85 (*b*); Item 3, married = 1.06 (*a*), 0.71 (*b*), single = 0.80 (*a*), 0.80 (*b*)). Further, RQ8, which proposed differences in response between married and single individuals on strain-based work-family conflict items, was addressed by the findings such that differences were shown for some of the strain-based items (Item 4, married = 1.03 (*a*), 0.75 (*b*), single = 0.99 (*a*), 0.68 (*b*); Item 5, married = 0.85 (*a*), 0.79 (*b*), single = 1.05 (*a*), 0.75 (*b*); Item 6, married = 1.01 (*a*), 0.72 (*b*), single = 0.78 (*a*), 0.54 (*b*)). The partial support is due to Item 4 not showing visual differences between groupings. The final research questions for marital status, RQ9, proposed differences on behavior-based items. Findings address this research question by showing differences for all three behavior-based items (Item 7, married = 0.26 (*a*), 0.03 (*b*), single = 0.30 (*a*), 1.06 (*b*); Item 8, married = 0.27 (*a*), 0.56 (*b*), single = 0.39 (*a*), 0.59 (*b*); Item 9, married = 0.22 (*a*), 0.70 (*b*), single = 0.37 (*a*), 0.87 (*b*)). Although differences are shown, the patterns produced may differ and are to be addressed in the hypothesis section that follows.

The marital status DIF results are reflected in Hypotheses 3a-3c. All following hypotheses in this section proposed that married individuals would endorse higher response option as compared to single individuals who had the same level of internal conflict (i.e., theta). If supported, the hypotheses reflect the conclusion that given the same level of internal conflict as a single person, married persons will be more likely to circle a higher response option. For time-based work-family conflict (Hypothesis 3a), the hypothesis was partially supported such that married individuals scored higher for at least half of the theta scale for each of the three items. The most convincing is Item 1, which

supports that married individuals are more likely to circle a higher response option across the entirety of the theta scale, since Items 2 and 3 reflect switching patterns between married and single individuals. Hypothesis 3b was not supported, in that, single individuals tended to circle a higher response option on strain-based work-family conflict items. The results for Hypothesis 3c provide partial support for the hypothesis, in that, two of the three items reflect higher scores by married individuals for the majority of the theta scale.

Two of the nine items – Item 2 and Item 3 – produced significant results based on marital status ($\chi^2 = 6.20, df = 1, p < .05$; $\chi^2 = 5.25, df = 1, p < .05$). One item – Item 6 – produced marginally significant results ($\chi^2 = 2.66, df = 1, p < .10$). Although both Items 2 and 3 are a subset of time-based work-family conflict, they reflect opposing patterns. Compared to Item 2, Item 3 had a higher discrimination (steeper slope), and a lower difficulty (location shifted left) for married individuals. Alternatively, compared to Item 2, Item 3 had a lower discrimination (flatter slope), and a lower difficulty (location shifted left) for single individuals. The marginally significant result, Item 6, produced a pattern where single individuals were more likely to endorse the item for the bulk of the scale (theta = -3.0-1.5), however at high levels of conflict (theta = 2.0-3.0), married persons tended to circle a higher response option. The significant results found provide additional grounds for the supported hypotheses, mainly for the time- and strain-based subdimensions of work-family conflict. In sum, there is some moderate non-uniform DIF findings for marital status for all subdimensions of work-family conflict.

As mentioned previously, an alternative way of looking at the results would be to say that two people who answer the same response option have differing levels of internal conflict such that a “7” to a married person, and a “7” to a single person may reflect two different levels of conflict. For the significant items here, an [approximate] “7” requires a lower internal level of conflict by single persons to give that response option compared to married persons (Item 2) or a higher level of internal conflict by single persons to give that response option compared to married persons (Item 3).

Parental Status. Parental status was examined using all nine work-family conflict items (see Tables 9a-9c; Figures 10a-10i). Visual differences, in that the graphs produced displayed differing patterns, were found in seven of the nine items. They items were as follows: Item 2 (slight), Item 4, Item 5, Item 6, Item 7, Item 8, and Item 9. Although the discrimination and difficulty parameters produced different patterns (e.g., Item 5 had higher discrimination for those without kids, and lower discrimination for those with kids), both Item 4 and Item 5 reflected a higher probability of circling most response options for single persons. Item 6 visually displays a non-uniform DIF graph where single persons are more likely to endorse a higher response option for the majority of the theta scale, but at the high end, where there is a lot of internal conflict, those with kids score higher. For Item 7, individuals with children are more likely to circle a higher response option, given equal levels of theta, across the entirety of the theta scale. Lastly Items 8 and 9 reflect higher endorsement by those with kids at the low theta scale, and lower endorsement (as compared to those without kids) at the high end of the theta scale

– non-uniform DIF. In sum, strain- and behavior-based DIF existed for all of the items within those subdimensions. Thus, strain- and behavior-based questions should be monitored and potentially eliminated when comparing parents and nonparents on work-family conflict items.

Results informing research questions (RQ) 10-12 are discussed the above descriptions. The findings address research question RQ10, which proposed differences between those with kids and those without on time-based work-family conflict items, by showing no differences between those with and without children (Item 1, parents = 1.18 (*a*), 0.12 (*b*), non = 1.19 (*a*), 0.68 (*b*); Item 2, parents = 1.36 (*a*), 0.83 (*b*), non = 1.15 (*a*), 0.77 (*b*); Item 3, parents = 1.11 (*a*), 0.75 (*b*), non = 1.06 (*a*), 0.80 (*b*)). Only slight, if any, differences were found. Findings addressed RQ11 by showing that differences did exist between parents and nonparents, such that all three strain-based work-family conflict graphs demonstrated differences between those with kids and those without (Item 4, parents = 1.26 (*a*), 0.85 (*b*), non = 1.02 (*a*), 0.61 (*b*); Item 5, parents = 1.10 (*a*), 0.89 (*b*), non = 1.22 (*a*), 0.74 (*b*); Item 6, parents = 1.46 (*a*), 0.83 (*b*), non = 0.85 (*a*), 0.57 (*b*)). Lastly, RQ12 was addressed through findings that showed that the three behavior-based work-family conflict items produced differences between the individuals who had kids and the individuals who did not (Item 7, parents = 0.33 (*a*), 0.67 (*b*), non = 0.30 (*a*), 1.06 (*b*); Item 8, parents = 0.27 (*a*), 0.56 (*b*), non = 0.39 (*a*), 0.59 (*b*); Item 9, parents = 0.22 (*a*), 0.70 (*b*), non = 0.37 (*a*), 0.87 (*b*)). Although differences are shown, the patterns produced may differ and are to be addressed in the hypothesis section that follows.

Hypotheses 4a-4c concern the parental status DIF results. All following hypotheses in this section proposed that individuals with children would endorse higher response options as compared to individuals without children who had the same level of internal conflict (i.e., theta). If supported, the hypotheses reflect the conclusion that given the same level of internal conflict as a person without children, those with children will be more likely to circle a higher response option. Hypothesis 4a was not supported. Not only did those with kids not consistently score higher than those without given equal levels of conflict, no differences were found in either direction for time-based items. Hypothesis 4b, relating to strain-based work-family conflict items, produced differences but the differences were in the opposite direction of the proposed hypothesis. Specifically, the hypothesis proposed that parents will be more likely to circle a higher response option given the same level of theta as a nonparent; however, the results reflected that nonparents circle a higher response option as compared to parents. Thus, Hypothesis 4b was not supported. Hypothesis 4c, proposing that persons with kids are more likely to endorse higher response options given the same level of theta as persons without kids for behavior-based work-family conflict items was partially supported. Persons with kids had a higher probability of circling a higher response option for at least half of the theta scale for each of the three items. Item 7 had the most drastic differences, in that, those with kids were more likely to circle a higher response option given equal levels of internal conflict as someone without kids, for the entirety of the theta scale.

For parental status DIF, significant findings were produced within Items 6, 8, and 9. For Item 6, both the discrimination and difficulty parameters were smaller for those

without kids ($\chi^2 = 10.16$, $df = 1$, $p < .001$). Thus, the slope was steeper for persons with children and the position of the graph was shifted right for those with children. The parameter results produced a graph that had those persons without children more likely to circle a higher response option for a good portion of the graph (theta = -3.0-1.0) and those with children to score higher for the remainder of the theta scale. Item 8 and Item 9 produced similar graphs ($\chi^2 = 8.25$, $df = 1$, $p < .001$; $\chi^2 = 12.38$, $df = 1$, $p < .001$), with Item 8 being slightly less drastic. Those with kids were more likely to circle a higher response option for the lower half of the graph and a lower response option for the upper half of the graph compared to those without kids, given equal levels of internal conflict. The main contributor to the differences found in these graphs is the larger slope produced by those without kids as compared to those with kids. The significance for the strain-based and behavior-based item provide additional support for the research questions and hypotheses. Moderate DIF exists for work-family conflict by parental status, especially for strain- and behavior-based work-family conflict items.

As with the prior sections, the results can be interpreted through response options rather than theta for a different explanation of the results. For example, with Item 8 and 9, a response option of [approximately] “3” will be reflective of a different level of internal conflict for those with and without kids. Thus, a lower level of internal conflict (i.e., -0.5) is needed to report a response option of “3” for those with kids, whereas a higher level of internal conflict (i.e., 0.5) is needed to report a response option of “3” for those without kids. In sum, there is some moderate non-uniform DIF findings for parental status.

Given the above results, based on all four demographic comparisons, there are additional notes to be made regarding the scale functioning. More specifically, a subset of the items were significantly different in several of the demographic comparisons. The concerns that arise from repeated significant differences, is that those specific items are functioning differently across people in many situations which may have profound implications for construct validity and practical use. The items of utmost concern are Item 6 and Item 8. Both items showed significant differences in three of the four demographic categories. The two items may be problematic in some way, and may require elimination from the scale. Of some, but lesser, concern are also Items 9, 2, and 3, which produced significant differences in at least one of the demographic categories.

Although the findings differed by demographic group, generally the differences were mild to moderate in nature such that there was some support through both visual perceptions and chi-square test analyses. For gender, the most prominent differences existed in the strain- and behavior subdimensions, however the results were not in line with the proposed hypothesis for the behavior-based item. For age, no differences existed for the middle to old group, but time-, strain-, and behavior-based conflict were present; however, no relationships were in the proposed direction. Time- and strain-based items were significant for this subdimension. For marital status, differences did exist for the time-, strain-, and behavior-based items. Of utmost concern, though, are the behavior-based items as both visual and significant findings were produced for that subdimension. For parental status, the subdimensions of concern are strain- and behavior-based work-family conflict such that the research questions and hypotheses were in line with the

proposed relationships and in turn, DIF existed. These finding is in line with the previously stated idea that the strain- and behavior-based items are of the highest concern.

The items that did not show DIF varied by demographic membership. For gender, Items 2 and 3 from the time-based subsection of work-family conflict did not show DIF. In addition, strain-based Item 5 also did not show DIF by gender. For age, Items 1 and 4 did not produce DIF. For marital status, only Item 4 did not produce DIF. Lastly, for parental status, all of the time-based work-family conflict items (Items 1, 2, 3) did not produce DIF. The items that do not produce DIF are able to be used in the literature without measurement implications and should continue to be used. See Tables 12a-12d for a summary of the findings.

Effect Size. For the purposes of the current study, effect size was calculated as the differences in probabilities between the groups conditioned on theta. The effect size was estimated for the theta level with the highest gap between groups. For example, men and women with a relatively high theta (i.e., 1.5) on Item 8: men had a 72% chance of endorsing the item (giving a response at the higher end) versus women at 57%, resulting in a delta of 14% (i.e., the effect size). Effect size is different from significance and visual testing such that effect size measures the distance between the two IRFs. Alternatively, significance tests reflect how likely it is that the results are due to chance. Visual tests are simply examining the graphs for differences.

Based on effect sizes, for gender, the item of concern is Item 8. Item 8 reflects high-theta women being less likely to endorse the upper end of the item compared to men while low-theta women are more likely to endorse the lower end of the item compared to men. For age, Item 3 and Item 8 pose concerns. Item 3 poses concerns only for the middle to old age groups such that high-theta older individuals are more likely to endorse the upper end of the item compared to middle-aged individuals. The pattern become substantially less noteworthy when examining the low theta levels for both age groups. For Item 8, high-theta middle-aged individuals are more likely to endorse the middle to high areas of the scale compared to their older counterparts. Similarly, mid to high-theta middle-aged individuals are more likely to endorse the middle to high areas of the scale compared to their younger counterparts as well. For marital status, only Item 9 poses concern. Low and high-theta single participants were more likely to endorse the entire scale response range compared to married individuals. For parental status, Items 4, 6, and 9 strike concern. Item 4 reflects mid-theta persons with no children being more likely to endorse the middle ranges of the response scale. Item 6 reflects low to mid-theta persons with no children being more likely to endorse the lower end of the item while high theta persons with no children are less likely to endorse the higher end of the item. Lastly, Item 9 reflects high-theta persons with no children are more likely to endorse the higher end of the item while low-theta persons with no children are more likely to endorse the lower end of the item.

ANOVA. Several ANOVAs were run as supplemental analyses to determine mean differences (Table 13). As mentioned previously, ANOVAs, and other primary analyses, can be misleading without first identifying if DIF exists. An average of the time-based items, strain-based items, behavior-based items, and an overall work-family conflict mean were used as the outcome variables. For gender, time-based and behavior-based work-family conflict items showed no differences between men and women ($F=2.09$, $df=1$, $n.s.$; $F=0.23$, $df=1$, $n.s.$). Alternatively, strain-based items and the overall measure of work-family conflict did show differences between men and women ($F=8.65$, $df=1$, $p < .01$; $F=3.94$, $df=1$, $p < .05$).

For age, a similar pattern of findings existed. More specifically, time-based and behavior-based work-family conflict items showed no differences in likelihood of responses (given the same level of the construct) between age groups ($F=2.15$, $df=2$, $n.s.$; $F=0.62$, $df=2$, $n.s.$). As before, strain-based items and the overall measure of work-family conflict did show differences between age groups, however the overall measure, when used as an outcome, was only marginally significant ($F=4.70$, $df=2$, $p < .01$; $F=2.79$, $df=2$, $p < .10$).

For marital status, no time, behavior, or overall conflict findings were indicative of mean differences ($F=0.07$, $df=1$, $n.s.$; $F=1.43$, $df=1$, $n.s.$; $F=0.18$, $df=1$, $n.s.$). Strain-based conflict showed marginally significant results ($F=3.42$, $df=1$, $p < .10$). For parental status, time-based conflict ($F=10.26$, $df=1$, $p < .001$), behavior-based conflict ($F=4.51$, $df=1$, $p < .05$), and overall conflict ($F=5.12$, $df=1$, $p < .05$) were indicative of mean differences. In contrast, strain-based conflict was not ($F=0.33$, $df=1$, $n.s.$).

Part Two, Qualitative Analyses. All of the individuals that participated in the quantitative section also responded to the qualitative items. This study diverges from typical mixed-method approaches because all participants were asked to respond, not a subset of participants based on desired characteristics or clusters. Additionally the medium in which the responses were obtained was different from typical qualitative approaches, in that, responses were collected via electronic means rather than in-person or phone interviews. Three items were used as part of the qualitative section, one item from each of the work-family conflict categories – time, strain, behavior. Qualitative questions were asked in regards to time-based Item 1, strain-based Item 5, and behavior-based Item 8. After completion of the nine quantitative work-family conflict items, participants were asked to describe why they responded to the question (i.e., circled a specific response option) the way that they did.

The follow-up qualitative analyses had themes identified through three coders. In other words, the in-depth qualitative data was reduced to reflect categorizations of participant statements. The themes were identified based on repetitive reading through of the comments to capture the essence of the participants' meaning in regards to the question posed. Single word descriptions were used to code the items. Themes were, in part, determined by the literature (Carlson et al., 2000; Greenhaus, 1989) but were also able to be developed naturally as a result of the responses provided. Comparison of responses by time-, strain-, and behavior-based items as separate entities was necessary to develop the overarching themes relevant to the category in question.

The coders were selected based on having an undergraduate or graduate standing in Psychology. The process followed a peer-review examination. In other words, two coders coded for themes based on their interpretation of the responses and a third coder checked the responses for accuracy and settled any discrepancies to gain consensus. Each reviewer was encouraged to create and/or eliminate categories based on their understanding of the participants' responses.

Following this, the items were examined to identify any similarities or differences by demographic group based on the developed themes. More specifically, the time-based work-family conflict items were analyzed by demographic, followed by a separate analysis for the strain-based work-family conflict items, and a final analysis by demographic for the behavior-based work-family conflict items. IBM SPSS Statistics was used for the qualitative portion of the study to conduct group difference tests.

As previously mentioned, there are six steps to conducting a sound thematic analysis. In the current study, I first familiarized myself with the data by repeatedly reading through the comments in an active way and searching for common patterns throughout (phase 1). Second, I generated initial codes which consisted of a list of common themes, or meaningful groups that seemed to emerge throughout the dataset (phase 2). Third, the coders searched for themes. Within this phase (phase 3), we refined our codes to represent themes commonly found in the literature (e.g., long hours, flexibility). The agreement process consisted of two coders blind rating the comments, and a third coder settling discrepancies between the prior two coders. During the fourth stage (phase 4), I reviewed the themes and refined them to reflect coherent patterns. More

specifically, I removed some themes that were not really themes or did not have enough responses to justify their inclusion. I also collapsed some themes that were overlapping and/or separated themes that needed to be broken out further. Fifth, I defined and named the themes to reflect terminology most often used in the work-family conflict literature and described the themes holistically so that readers would understand the essence of the pattern (phase 5). Sixth, I produced the report which included final analyses and a write-up of the results (phase 6).

Thematic Findings. Qualitative analysis yielded nine themes reflecting time-based work-family conflict (Table 10a), nine themes reflecting strain-based work-family conflict (Table 10b), and four themes reflecting behavior-based work-family conflict (Table 10c). Representative descriptions of participant responses are included to provide a textural description and provide evidence of themes that describe individuals' experiences of work-family conflict. Overarching themes by subdimension are described first, followed by summary explanations of how each demographic group differed in their descriptions of work-family conflict responses.

Across all demographics, the time-based work-family conflict responses reflected (1) telework/flexibility, (2) missing events, (3) hours and overtime, (4) working 24/7 or bringing work home, (5) working weekends and/or holidays, (6) scheduling conflicts, and (7) location concerns, including commute time. Two additional categories including work not interfering with family life, and not allowing work to interfere with family life were also created. In the sections that follow, no interference and disallowing interference are

reflective of the participants who did not report high levels of conflict. The most commonly cited of the categories, excluding the does not interfere category, was hours and overtime. An example comment from the hours and overtime category was:

I would like to spend more time with my family. I work a lot and my hours change often.

Telework/Flexibility (4.7%). Some individual's described a great deal of flexibility and/or the ability to work from home. Telework was identified by some participant's as a barrier, and by others a facilitator. Working from home was described by some as never being able to "switch off" and always having something to juggle in addition to work tasks. By others, it was described as a means to caring for their family and completing work tasks simultaneously.

Missing Events (13.1%). Missing events included the responses that attributed their time-based interference to not being able to attend family events. The events ranged from a child's sport game to school functions to niece's/nephew's communions.

Hours and Overtime (15.2%). The individuals who discussed hours and overtime as a barrier to family life, mentioned working long hours due to demands at work or, in some cases, demands at home to support their families. Participants' described not having enough time at home with their families due to the long hours spent at work.

24/7 (2.7%). The participants whose responses fell in the 24/7 category described both the inability to be fully present at home due to work demands and also, the need to bring work home because the demands at work are so overwhelming.

Weekends and Holidays (5.7%). Some participants described the need to work weekends and holidays due to their job demands. Most of the individuals who described their responses in more detail indicated that weekends and holidays were tough because that was the time that their family was not working and all together.

Scheduling (5.1%). Those who described scheduling indicated poor schedules, many times due to shift work or multiple jobs. Scheduling did overlap with some of the other categories but was categorized as scheduling if a participant outright addressed a scheduling conflict.

Location (1.5%). The location category took on properties that were reflected in both the home and work life such that the responses that were categorized as location were those that referenced a long commute time (work) or a long distance from family members (family).

No Interference (10.5%). The individuals who described no interference simply stated that there was no conflict (i.e., “it doesn’t”). More specifically, some addressed no issues with schedules, no stress, and having plenty of time with family members. Also in this category were those who commented that they did not have family.

Disallowing Interference (41.6%). Somewhat similar to the prior category, disallowing interference was attributed to those who would have interference but take additional steps to ensure that interference does not occur. People in this category made it clear that they will not allow their work life to impede on their family life such that no interference is due to a conscious choice rather than the nature of the job.

For strain-based work-family conflict items the themes identified were (1) physical fatigue, (2) colleagues or client burden, (3) stressful working conditions, (4) disengagement, where individuals do not want to participate in events and simply want to sleep or relax when at home, (5) mental fatigue (i.e., feeling tired), (6) emotional fatigue (i.e., grumpy, no patience), and (7) feeling energized. Similar to the time-based categories, the strain-based categories produced two additional categories that reflected the idea that work does not affect the individual through strain, and also that the individual does not let the two interfere by “switching-off” when at home. The strain-based category had two categories that were tied for the most common. They did, however, have less individuals respond than the no interference category. They are stressful working conditions and disengagement. An example item from the stressful working conditions category was:

My work has a lot of stressful and demanding deadlines, and so I often feel so tired after work that I don't do things like go for a walk with the dogs or go for a run with my husband when I want to.

An example item from the disengagement category was:

Work is pretty exhausting for me, so when I get home, all I want to do is relax alone in my bed for the remainder of the night.

Physical Fatigue (2.1%). The individuals who described experiences of physical fatigue mentioned being physically exhausted after work. More specifically, that their bodies hurt and they did not feel like doing much.

Colleagues or Clients (5.9%). The responses that fell in the colleagues/clients category were in regards to having to speak to too many people throughout the day, deal with conflict, or difficult/demanding interactions. Many of the responses in this category mentioned not wanting to speak or solve issues when at home because they do it all day at work.

Working Conditions (11.0%). The people in this category addressed a fast pace environment or specific tasks at work that drains them mentally and physically where that exhaustion spills over to their home life.

Disengagement (11.0%). The individuals in this category stated very specifically that they just want to rest when they get home. Because of this, they also discussed not wanting to attend events and just wanting to sleep or relax.

Mental Fatigue (10.4%). Mental fatigue was noted by those who talked about their mind/brain being so tired from everything at work that they cannot shift once they get home. In this category, fell many individuals who talked about being tired or exhausted from work when at home.

Emotional Fatigue (2.0%). Emotional fatigue was somewhat different in that it addressed feelings of sadness or anger, or not being able to forget things that

happened at work. For example, one person talked about replaying 911 calls over in their head after a long day at work. Also included were those who came home grumpy or without patience.

Energy (3.2%). Some individuals actually felt that work energized them rather than drained them, as the question proposed. Responses in this group described their work and home life as having positive effects on each other where one allows them to enjoy the other more, possibly through keeping them upbeat, challenging them, etc.

No Interference (39.7%). As with the previous section, many individuals addressed having no interference between work and home life for strain-based conflict. Some discussed having plenty of energy at the end of the day or having a job that is not stressful.

Disallowing Interference (14.8%). Those who responded in the disallowing interference category mentioned the possibility of being tired but not letting it take time away from their families. These individuals either cope with the stress or “power through” to spend time with their families.

Lastly, the behavior-based work-family conflict categories reflect (1) emotional or personality related interference, (2) behavior or task related interfere, and (3) productive interference. Also in the behavior-based category, similar to the above, are persons who purport that their work does not interfere, behaviorally, with their home life.

Interestingly, a few additional categories arose out of the behavior-based question including individuals who (1) claimed that the question did not apply to them, or (2) that

they did not understand the question. The most commonly cited behavior-based category was behavior or task related inference. However as with the previous two forms of interference, that category was second to the no interference category. An example item from the behavior or task related interference was:

I work in sales so trying to negotiate with family members like I do at work doesn't often work out well

Emotional/Personality (11.7%). Individuals who responded that counter-productivity was due to emotional or personality related factors, described experiences where the interference was due to changing their personality at work and at home. For example, some discussed needing to be aggressive or firm at work where caring and love is needed at home.

Behavior/Task (22.1%). Behavior or task-related interference fell more along the lines of interference due to the actual tasks. For example, a veterinarian cannot treat their children at home the way they treat animals at work. Similarly, a computer engineer cannot only sit in front of their laptop at night.

Productive (18.6%). Several people addressed the idea that work was not counterproductive, but actually productive such that the skills they learn at work enhances their family life. This is done by expanding their skill set and teaching them new ways to deal with situations.

No Interference (41.4%). As with the prior two sections, individuals discussed no interference between their work and family lives.

Not Applicable (2.6%). Interestingly, a subset of the respondents stated that the question did not apply to them. In most cases, the individuals did not elaborate further. Sixteen (16) respondents were included in this category.

Failure to Understand (3.6%). Also interesting, a subset of the participants stated that they did not understand the question. This may have substantial implications for the work-family conflict construct validity moving forward. Twenty-one (21) respondents were included in this category.

Although the previous themes were noticed in all demographics to some degree, there were some differences among demographics regarding their responses to work-family conflict items. The following sections describe each demographic in more detail. Qualitative comparisons between demographics were used to better understand how their experiences differed. The chi-square statistic was used to determine if differences in coded categories differed by demographic standing. Chi-square (χ^2) applies a statistical test to cross-tabulation by comparing actual observed frequencies with expected frequencies (expected frequencies if randomly assigned). The question that gets answered by the chi-square statistic is whether the unequal distribution across demographics is due to chance. Table 11 provides a summary table chi-square qualitative findings.

Gender. Men and women had the same top three response categories for time-based work-family conflict, however the order in which they occurred was slightly different. More specifically, the top three categories for men were (1) no interference, (2)

hours/overtime, and (3) do not allow interference. For women the top three categories were (1) no interference, (3) hours/overtime, and (3) missing events. The categories above were derived from cross-tabulation frequencies. The chi-square statistic produced non-significant finding for the time-based work-family conflict category ($\chi^2 = 13.52$, *n.s.*). Thus, although slight differences were present, the qualitative data for time-based interference did not produce significant differences between men and women. These findings addressed RQ1a by showing that differences did not exist.

For the strain-based work-family conflict items, men and women attributed their strain-based conflict to different factors. As with time-based conflict, no interference was the highest cited category for both men and women. Following this category though, men said the reasons for their strain-based conflict were (1) did not allow interference and (2) disengagement – wanting to sleep/relax and/or not attend events. Alternatively, women attributed their strain-based conflict to (1) being mentally exhausted, and (2) the work itself being stressful or overwhelming. The chi-square statistic produced marginally significant results ($\chi^2 = 14.43$, $p < .10$). In other words, probability of men and women responding for different reasons is not due to chance. In line with this, I suggest that men and women have different experiences contributing to their perception and/or understanding of work-family conflict items. These findings addressed RQ1b by showing that differences may exist.

For behavior-based work-family conflict, cross-tabulation results revealed no differences in participants' reasoning for responses. Both men and women described their behavior-based conflict as (1) no interference, (2) behaviors/tasks, and (3)

emotional/personality, respectively. As expected given a lack of differences, the chi-square statistic produced a non-significant result ($\chi^2 = 3.32, n.s.$). These findings addressed RQ1c by showing that differences did not exist.

As a supplemental analysis, I ran the thematic patterns for only those individuals who experienced high levels of work-family conflict to determine whether there were differences just among those individuals who experienced conflict. Included in this group were those who rated a five (5), six (6) or seven (7) on the work-family conflict measure. The same themes applied, such that I used the entire dataset to generate the categories but filtered the analyses based on those who had high levels of conflict. For the time-based item, the results were not supportive of differences ($\chi^2 = 7.89, n.s.$), nor did the top categories differ by gender. Moreover, both men and women with high time-based work-family conflict rated hours/overtime and missing events as their top two reasons for interference. For the strain-based item, the results were not supportive of differences ($\chi^2 = 6.09, n.s.$). Similar to above, the top reasons for work-family conflict did not differ either, such that stressful working conditions and disengagement were among the top reasons for both men and women. For the behavior-based item, the results were not supportive of differences ($\chi^2 = 7.59, n.s.$), and the top qualitative categories for men and women were the same, being task-related interference and emotional-related interference.

Age. For age, the cross-tabulation frequencies were different by young, middle, and older-aged individuals. Young participants described their top three reasons for responding the way that they did as (1) no interference, (2) hours/overtime, and (3)

missing events. Middle-aged individuals attributed their top three reasons for responding the way that they did as (1) no interference, (2) disallows interference, and (3) hours/overtime. Lastly, older-aged individuals mentioned (1) no interference, (2) hours/overtime, and (3) missing events. Interestingly, young and old individuals attributed their responses to the same reasons but middle-aged individuals varied slightly. The chi-square statistic for the time-based work-family conflict items revealed non-significant findings ($\chi^2 = 22.73$, *n.s.*). These findings addressed RQ2a by showing that differences did not exist.

Strain-based work-family conflict reflected similar findings as the time-based work-family conflict subgroup such that young and old individuals described similar reasons for their responses where middle-aged respondents differed. Young and old individuals described (1) no interference, (2) disengagement, and (3) stressful working conditions. Middle-aged individuals, alternatively, described the reasons for their responses as (1) no interference, (2) disallowing interference, and (3) being mentally exhausted. As with time-based interference, the chi-square statistic was non-significant for strain-based conflict as well ($\chi^2 = 29.95$, *n.s.*). These findings addressed RQ2b by showing that differences did not exist.

For behavior-based work-family conflict a different pattern emerged such that young, middle, and old individuals all gave the same category responses for their reasoning behind the quantitative ratings. Those categories were (1) no interference, (2) behavior/tasks, and (3) emotional/personality. However, although the reasoning categories were the same, the comparison of frequencies produced a significant result (χ^2

= 20.94, $p < .05$). In other words, the rate of occurrences in which young, middle, and old individuals gave specific response options was not equally distributed. These findings addressed RQ2c by showing that differences did exist.

Following the full analysis, I ran the thematic patterns for only those individuals who experienced high levels of work-family conflict to determine whether there were differences for those who experienced interference. Included in this group were those who rated a five (5), six (6) or seven (7) on the work-family conflict measure. The same themes applied, such that I used the entire dataset to generate the categories but filtered the analyses based on those who had high levels of conflict. For the time-based item, the results were not supportive of differences ($\chi^2 = 20.12$, *n.s.*), nor did the top categories differ by age. Moreover, young, middle, and older individuals with high time-based work-family conflict rated hours/overtime and missing events as their top two reasons for interference. For the strain-based item, the results were not supportive of differences ($\chi^2 = 8.69$, *n.s.*). Similar to above, the top reasons for work-family conflict did not differ either, such that stressful working conditions and disengagement were among the top reasons for all three age groups. For the behavior-based item, the results were not supportive of differences ($\chi^2 = 15.16$, *n.s.*), and the top qualitative categories for young, middle, and older individuals were the same (task-related interference and emotional-related interference).

Marital Status. Time-based work-family conflict reasons for qualitative responses were similar but varied in order of occurrence for single and married

individuals. More specifically, single individuals attributed their responses to time-based items to (1) no interference, (2) hours/overtime, and (3) missing events. In contrast, married individuals attributed their conflict to (1) no interference, (2) missing events, and (3) hours/overtime. Although slight differences were found in qualitative responses, the findings addressed RQ3a by showing that differences did not exist ($\chi^2 = 4.35$, *n.s.*).

Cross-tabulation results indicated that married and single individuals have relatively different reasons for their qualitative ratings. Married individuals indicated that their top three reasons for providing the responses that they did were (1) no interference, (2) does not allow interference, and (3) stressful work. Single individuals indicated their top three reasons as (1) no interference, (2) disengagement, and (3) does not allow interference. The chi-square statistic produced marginally significant results such that the frequency in which married and single persons provide reasons for their responses vary to some degree ($\chi^2 = 14.73$, $p < .10$). These findings addressed RQ3b by showing that differences may exist.

Reasons for behavior-based work-family conflict were the same for married and single individuals. The reasons, in order of decreasing occurrence, were (1) no interference, (2) behavior/tasks, and (3) emotional/personality. The chi-square statistic produced non-significant results such that married and single individuals do not differ in their rate of reasons why they responded the way that they did ($\chi^2 = 4.48$, *n.s.*). These findings addressed RQ3c by showing that differences did not exist.

As a follow-up analysis, I ran the qualitative analyses for only those individuals who experienced high levels of work-family conflict to determine whether there were

differences among those high on conflict. Included in this group were those who rated a five (5), six (6) or seven (7) on the work-family conflict measure. The same themes applied, such that I used the entire dataset to generate the categories but filtered the analyses based on those who had high levels of conflict. For the time-based item, the results were not supportive of differences ($\chi^2 = 13.77$, *n.s.*), nor did the top categories differ by marital status. Moreover, both married and single individuals with high time-based work-family conflict rated hours/overtime and missing events as their top two reasons for interference. For the strain-based item, the results were not supportive of differences ($\chi^2 = 22.41$, *n.s.*). Similar to above, the top reasons for work-family conflict did not differ either, such that stressful working conditions and disengagement were among the top reasons for both groups. For the behavior-based item, the results were not supportive of differences ($\chi^2 = 15.54$, *n.s.*), and the top thematic categories for married and unmarried individuals were the same. Those categories were task-related interference and emotional-related interference.

Parental Status. The reasoning for time-based work-family conflict items differed by parental status. More specifically, those without children tend to attribute their responses to (1) no interference, (2) hours/overtime, and (3) do not let it interfere. On the other hand, those with children tend to attribute their responses to (1) no interference, (2) missing events, and (3) hours/overtime. These findings addressed RQ1a by showing a chi-square difference test that demonstrated that differences did exist ($\chi^2 = 19.67$, $p < .05$). In other words, there is an unequal distribution of response reasons for

those with children and those without children, which provide an explanation for the differences in quantitative responses as well.

Coding differences, in relation to parental status, were only slightly different for strain-based work-family conflict items. Specifically, both those with and without children noted (1) no interference, and (2) does not let work interfere, as the top two options. The difference occurred in that those without kids referenced working being stressful as their third category, and those with kids referenced being tired and just wanting to relax (i.e., disengagement) as their third category. The differences were not large enough to produce a significant chi-square results ($\chi^2 = 13.06$, *n.s.*). These findings addressed RQ4b by showing that differences did not exist.

The final behavior-based work-family category produced slightly different reasons for responses by parental status. They were, for those with children, (1) no interference, (2) behavior/tasks, (3) disallows interference. For those without children, they were (1) no interference, (2) disallows interference, and (3) behavior/tasks. Thus, the same reasons were given but in a different order. The chi-square findings revealed non-significant results ($\chi^2 = 9.50$, *n.s.*). Consequently, these findings addressed RQ4c by showing that differences did not exist.

As a supplemental analysis, I ran the thematic patterns for only those individuals who experienced high levels of work-family conflict to determine whether if differences existed within the subset that experienced conflict. Included in this group were those who rated a five (5), six (6) or seven (7) on the work-family conflict measure. The same themes applied, such that I used the entire dataset to generate the categories but filtered

the analyses based on those who had high levels of conflict. For the time-based item, the results were not supportive of differences ($\chi^2 = 12.09$, *n.s.*), nor did the top categories differ by parental status. Moreover, both those with children and those without who experience conflict rated hours/overtime and missing events as their top two reasons for time-based interference. For the strain-based item, the results were not supportive of differences ($\chi^2 = 8.70$, *n.s.*). Similar to above, the top reasons for work-family conflict did not differ either, such that stressful working conditions and disengagement were among the top reasons for both workers with children and childless workers. For the behavior-based item, the results were not supportive of differences ($\chi^2 = 5.83$, *n.s.*), and the top qualitative categories for both parents and nonparents were the same, being task-related interference and emotional-related interference.

CHAPTER ELEVEN

DISCUSSION

Summary of Findings

This dissertation sought to identify and explain the influence of demographic variables on individuals' responses to work-family conflict. Using a semi-inductive, mixed-methods approach, the study used both quantitative and qualitative procedures to collect and analyze the data, and examine the combination effect of both methods to better address the research questions.

The results produced from the current study provide evidence that demographic subgroups may have different interpretation of Carlson et al.'s (2000) measure of work-family conflict. Therefore, individuals responding to the same item may have different ideas of what constitutes work-family conflict in relation to the different response options. Particularly, I found different response distributions mainly for strain- and behavior-based work-family conflict. This could suggest that perceptions of work-family conflict around feeling stressed or behavioral interference from competing roles may involve more non-uniform perceptions and reactions. There was additional support in regard to differences in individuals' reasons as to why they responded the way that they did by demographic. However, consistent quantitative and qualitative findings were produced for only a subset of the demographic groups.

The present findings provide support for a re-evaluation of specific work-family conflict items from the Carlson et al. (2000) scale and a demographically different practical approach to work-family conflict. Tables 12a-d provide a summary of the

findings. Findings differed by demographic group, and work-family conflict subdimension, such that in some cases, visual differences emerged that may not have had corresponding significant differences or qualitative support. The results that produce both visual and significant differences provide clarity in regards to the findings and are considered to be stronger findings in the current study. All of the cases discussed below indicate that a specific response option (e.g., 6) means something different to the groups within the different demographics.

It is important to note the impact that the current findings should have on past, current, and future research. A finding of DIF informs researchers that two groups of individuals are interpreting an item differently, producing dissimilar IRFs. Alternatively, mean differences tells researchers that two groups of individuals experience the construct differently. More specifically, due to differences in life experiences, an individual's schema for interpreting an item may differ over and above a group difference finding. The cleanest approach would be to identify that no DIF exists between two groups, and then to run mean differences. Because this is not always an option, researchers can run DIF analyses and mean difference analyses in silo, but the results may be muddled. Thus, the researcher will be unable to identify if the difference is due to mean differences or interpretation differences. It can be argued that the bridge to differentiate where a group's sensitivity towards items (or constructs) lies in the DIF analyses.

Gender. Gender produced no DIF for time-based work-family conflict items. However, gender differences in DIF did exist for a subset of strain- and behavior-based

work-family conflict items. The DIF presented here is considered moderate such that there are both visual and significant differences. In lay terms, this means that men and women are responding differently to some strain- and behavior-based work family conflict items due to their interpretation or understanding of the presented items. Based on the results, is possible that women are more sensitive to the wording of the strain-based item leading to a higher response option whereas for the specific behavior-based item, men may be more sensitive to the item wording leading to a higher response option choice.

The above results suggest response choices and internal levels of conflict are not aligned for the items described above. I propose that the differences in interpretations by gender may be a factor of gender norms, where men and women are expected to take on certain roles, contributing to their sensitivity towards the items presented. At the risk of overgeneralizing, it is possible that men are more sensitive to work-related tendencies and women to family-related tendencies such that women are more in tune with the interference than men for strain-based conflict because it inhibits their ability to successfully handle family-related matters; however, men may be more sensitive to the wording of the behavior-based conflict due to their need for a seemingly firmer demeanor at work which spillovers into the home role.

The results revealed gender differences in the strain-based qualitative item. Thus, the frequencies by which the reasons why individuals are responding to the strain-based item differed by men and women. In line with the above findings, the reasons that those of different genders are circling a specific response option may be a function of their

conflict stemming from different concerns, or the ability to cope with the conflict. Of the men who experience conflict, the reasons portrayed for the interference were attributed to disengagement when at home. Men described simply wanting to sleep or relax when at home, and wanting little to do with family events. Interestingly, of the women who experienced conflict, women reflected on stressful working conditions where fast-paced environments and strict due dates contributed to their interference. Additionally, women also spoke of mental exhaustion where being so tired at home inhibits their ability to help their family members.

The reasons provided here suggest that conflict occurs for both men and women, but the reasons behind the conflict differs, in turn producing differences in the response option they circle (even when they have the same level of internal conflict). Coupled together, the quantitative and qualitative results produced in the current study suggest for gender differences in work-family conflict at the item level either through DIF or thematic, qualitative means for the strain- and behavior-based subdimensions.

Age. Age produced no DIF for the comparison of middle-aged to old-aged individuals for any of the subdimensions of work-family conflict. Alternatively, mild DIF was found for the comparison between young-aged and middle-aged individuals such that the groups varied visually and significantly on a subset of the behavior-based work-family conflict items. For one of the behavior-based items (Item 8), the results suggested that middle-aged individuals are more inclined to respond higher than younger individuals who, internally, have the same level of conflict possibly due to additional

demands making them interpret the item more severely. A roughly opposite pattern was observed for the other behavior-based item (Item 9), which indicated that younger individuals are responding higher high levels of internal conflict. The inconsistency here makes it difficult to propose a consistent pattern for ages tendencies for the behavior-based items; however, are a clear indication that differences in likelihood of a response given the same level of the construct do exist between age groups.

The findings presented above mean that a specific response option for one group is not equivalent to the response option for the other group. For example, the internal level of conflict associated with a “4” for young, middle, and old individuals is different based on their understanding of the item or the demands to which they attribute their responses. The inconsistent findings make it difficult to conclude differences based on subdimension, but do shed light onto the fact that there are clear differences in likelihood of responses given the same level of the conflict between age groups for some items. It is plausible to attribute the differences in interpretation to different life experiences and roles. Based on the findings, it may be suggested that younger individuals experience different interpretations of conflict compared to middle-aged. Particularly, it is possible that the bulk of younger individuals do not have as many demands at home as middle-aged individuals because they are not married or do not have children.

The behavior-based work-family conflict item – Item 8 – showed differences in qualitative responses by age. Thus, the frequencies at which young, middle, and old individuals responded to the behavior-based item were found to differ in their means. The response categories across ages are similar, but the rates at which they respond are

different such that all ages consider behavior and task related inference to occur more often than personality or emotional related interference. This means that for all age groups, behaviors, like treating patients, coding, or marketing sales, were described more often as reasons for interference than personality related conflicts including firmness or aggressiveness. Taken together, the quantitative and qualitative results produced in the current study suggest age differences in work-family conflict at the item level either through DIF or thematic, qualitative means for the behavior-based items.

Marital Status. Marital status produced moderate DIF, specifically for items in the time- and strain-based categories. The items varied both visually and significantly for two of the time-based items and one of the strain-based items (marginally). The time-based items reflected opposing patterns which suggests that there are differences by marital status in all time-based work-family conflict items but that the graphical depiction of differences may not be alike. Thus, the meaning of time-based work-family conflict items may differ by whether a person is married or single, but depending on the specific wording, response patterns may fluctuate. For the strain-based item – Item 6 – the results suggested for very high levels of conflict, married individuals are more sensitive to the items and interpret the item as more severe (at low to mid levels, single individuals are more sensitive).

The above finding means that the response option answered may not reflect a person's true level of conflict, where one group within the demographic may be skewing their responses based on interpretation of the items. Thus, married and single individuals

may be picking up on different aspects of the question (e.g., work vs. family) contributing to their differences in their perception of work-family conflict. The differences may be due to different levels of demands and resources for single and married individuals. Specifically, married and single individuals may have equal levels of conflict but the demands and resources in their lives moderate their response choice such that they may have the means to cope with the conflict.

Married and unmarried people differed in the reasons for responses to work-family conflict items for the strain-based item, such that stressful work was more commonly cited by married individuals and disengagement was more often cited by single individuals. In light of these findings, the current research suggests that the reasons why married and single individuals respond to work-family conflict items may differ based on their life experiences and demands given that they are in vastly different stages in their lives. Married individuals may attribute most of their conflict to stressful working conditions where the nature of their work causes strain that spills over to other areas of their lives. In contrast, single individuals do not name stress as their main contributor to conflict, but instead reference not feeling like doing anything when at home, and simply wanting a break from events.

In sum, the combination of the quantitative and qualitative results produced for marital status suggested interpretation differences in time- and strain-based subdimensions of work-family conflict at the item level; the DIF and thematic findings were aligned for the strain-based items.

Parental Status. Parental status produced no DIF for the time-based work-family conflict items. Moderate DIF was found for parental status for strain- and behavior-based work-family conflict. The combination of visual and significant differences were found for a subset of the strain- and behavior-based items. In lay terms, for the listed items, those with children and those without children are interpreting a subset of the work-family conflict items differently which contributes to the differences in response choices answered by the participants in their respective categories. Based on the subdimension, the results suggest that those without children are responding higher when the conflict levels are of less concern for strain-based conflict. Alternatively, for behavior-based conflict, those without kids are responding more severely when conflict is low.

This means that a person's internal level of conflict may not be indicative of their response choice resulting in two people choosing different response options even when their conflict levels are seemingly identical. Similar to the marital status items, the differences in results may be due to varying demands by parental status contributing to different interpretations of the items. The differences may also be attributed to societal expectations where those with or without children are altering their response options to adhere to the level of conflict they feel is appropriate based on society's definition of suitable levels of conflict. For instance, childless workers may feel they are expected to have less conflict and in turn, adjust their response options based on that rather than on their true conflict level. The findings suggest potential differences in responses based on parental status for some strain- and behavior-based items.

The significant qualitative findings were associated with the time-based item. The finding suggests that those with and without children attributing their responses to different reasons and respond with those reasons at different frequencies. Thus, the wording of the question is perceived differently depending on whether a person with children or a person without children reads the item. The main contributor to conflict, for those parents who experience conflict is missing events. This is not surprising that parents describe being unable to attend field trips or after school functions. Alternatively, those without children attribute their time-based conflict to the amount of hours worked, possibly due to a focus on their career rather than children. Surprisingly, the qualitative difference found here does not align with the significant findings found as part of the quantitative section; thus, interpretation differences were found for all three forms of conflict but different findings emerged based on the approach (qualitative or quantitative) used such that qualitative findings suggested time-based conflict and quantitative findings suggested strain- and behavior-based differences.

Effect Size. Based on the effect sizes produced (see Tables 6c, 7c, 7f, 8c, 9c), items may warrant different approaches. It is important to note that effect sizes are a non-trivial analysis that is used to estimate the actual space between IRFs. There is no widely agreed upon method and instead, there is many competing procedures. However, researchers cannot blindly propose a “go/no-go” based on limited findings (as the same holds true for significant testing/ p -values). The real questions is *why* there is DIF produced in certain items. There are a few options based on the severity of the effect size –

1. If there is little to no effect, research and practice can continue to use the item.
2. If there is mild DIF, research should monitor the item and conduct follow-up research.
3. If there is moderate or severe DIF, research should consider modifying or deleting the concerning items.

*A good solution would be to run the primary analysis with and without the concerning items.

Within the data, all of the effect sizes were small to moderate in nature. Thus, for the items with no DIF (e.g., Item 2 for gender), should continue to be used with no negative implications. However, the items that show mild DIF (e.g., Item 1 for gender), should be further investigated but no immediate action should be taken. Lastly for items showing moderate DIF (e.g., Item 8 for gender), researches should consider modifying or eliminating the items. However, items should not be arbitrarily eliminated but instead, be examined for *why* differences exist first.

As discussed, the item in question for gender is Item 8. The follow-up should address *why* Item 8 may be problematic. To reiterate, Item 8 reflects high-theta women being less likely to endorse the upper end of the item compared to men while low-theta women are more likely to endorse the lower end of the item compared to men. As Item 8 is a behavior-based item, it is possible that men and women are interpretation the question differently because the behaviors that trigger interference for them vary. For example, men may be picking up on the “counter productivity” portion of the item stemming from their work behavior being more aggressive in nature and spilling over

into their home role. Women, alternatively, may not see their behavior as counterproductive even if interference exists.

As mentioned, Item 3 and Item 8 pose concerns for the age category. I will discuss Item 8 below as it has implications for all three age groups. To reiterate, Item 8 reflects high-theta middle-aged individuals being more likely to endorse the middle to high areas of the scale compared to their older counterparts. Similarly, mid to high-theta middle-aged individuals are more likely to endorse the middle to high areas of the scale compared to their younger counterparts as well. Interestingly here, the pattern is similar such that high-theta middle-aged individuals are more likely to endorse the higher end of the theta scale compared to both old and young individuals. As Item 8 is a behavior-based item, it is possible that middle-aged individuals have more people at home that are dependent on them and so they are held more accountable to their behavior. For instance, the age group defined as middle-aged reflects those who are 30-45 which are typically the individuals who have young children or a spouse at home. It is much more plausible for behavior to be counterproductive when others are affected by the behaviors, and thus, middle-aged individuals may be more sensitive to the “counter productivity” aspect of the question.

As discussed, Item 9 posed concerns for marital status. To reiterate, low and high-theta single participants were more likely to endorse the entire scale response range compared to married individuals. In contrast to what I believed would occur, Item 9 provided evidence that single individuals will circle a higher response option than married individuals. Without the support of theory, it is difficult to argue that this is a

plausible finding that should be acted upon. Although the finding should be taken into consideration, the *why* behind the finding is difficult to propose. However, Item 6 also posed concern for marital status. This item reflected a non-uniform DIF pattern which may be attributed to Item 6 having no mention of “family” in the question. The lack of family-related terminology may have enabled single individuals to be more likely to endorse the item for the majority of the scale (excluding the highest portion of theta).

As previously mentioned, parental status reflected moderate effect sizes for Items 4, 6, and 9. As Item 6 demonstrates differences most closely aligned to my hypotheses, I will discuss it further here. To reiterate, Item 6 reflects low to mid-theta persons with no children being more likely to endorse the lower end of the item while high theta persons with no children are less likely to endorse the higher end of the item. The *why* behind why DIF exists for this item may be that, for high levels of conflict, those with children have higher expectation when at home, and thus, their stress levels become more prevalent. Those without children tend to have the opportunity to decompress after work, whereas those with children have immediate demands. Those with children may key into words in the question like “too stressed.”

Across the items, it is important to note that the language used in work-family conflict items is often double and/or triple barreled (Gloria,). The DIF found in the current study may be a function of this commonality, in addition to the specific wording of the items. Taken together, the results are partially in line with the significant findings. I would warrant caution on these items when used with the respective demographics. There is little consistency on biased items across the four demographic groups.

RQs, Hypotheses, and Qualitative Result Patterns. There was only one quantitative research question-qualitative research question-hypothesis combination that reflected at least partial support for all three sections. The findings were relevant to the strain-based work-family conflict items for gender differences (RQ2). In this case, there were gender differences for some strain-based work-family conflict items, the frequencies by which the reasons why genders responded the way that they differed significantly, and the hypotheses were at least partially supported such that the pattern was similar across gender. There was additional significant support for the gender hypotheses which means that the patterns found were in line with current theory and did not occur due to chance, thus, provide support to confidently say that differences exist and the patterns produced can be expected across the population. Thus, it is plausible to encourage changes to the current scale based on this finding. More specifically, it was found that women tend to endorse strain-based work-family conflict items more than men given the same level of internal conflict. This was true especially when individuals had a high level of internal conflict. Also supported, was the reasons why individuals respond the way that they do to strain-based items, such that women and men attributed their responses to different reasons for interference. This may indicate that men and women are picking up on different words in the questions or that the meaning of the questions is actually different based on whether someone is a man or a woman. For example, women noted being mentally exhausted and work being stressful, whereas men noted not allowing interference and disengagement. Thus, women may be more likely to pick up on the

“drained” portion of the question whereas men may be more likely to pick up on the “contributing to my family” portion.

In line with the above findings, two research questions (RQ6, RQ8) provided at least partial support for the research questions and support for differences in frequencies for the reasons why persons responded the way that they did. Significant differences were found but they were not necessarily in the hypothesized direction which proposed that married individuals would circle a higher response option than single individuals given equal levels of internal conflict. For these, the takeaway is that differences do exist between married and single individuals, and the reasons why persons respond differently differ as well; however the literature may not be in line with the findings. In other words, the meaning of the question differs by age and marital status and can be attributed, at least in part, to interpretation differences of the questions. For example, differences lie between married and single individuals such that married individuals attribute some of their interference to stressful working conditions whereas single individuals attribute it to disengagement at home. It is arguable that married individuals are picking up on the “work” aspect of the question whereas single individuals are drawn to the “home” aspect of the question. The inconsistency in significant findings and lack of theory in this research area makes it difficult to propose clear changes to the current scale based only on the above findings but do encourage further investigation into the relationships. Improved strain-based and behavior-based items are warranted.

The final pattern produced was for the items in which research questions and hypothesis support was found, but no support for thematic differences in the qualitative

questions existed. RQ3, RQ7, RQ11, RQ12 reflect this pattern. More specifically, visual differences were found in support of the research questions and significant results were found, but not necessarily in support of the hypotheses. It is important to note that RQ7 and RQ12 consisted of significant support in the hypothesized direction. To interpret, in RQ7, the results supported time-based differences based on marital status. Moreover, the results indicated that married individuals endorsed higher response options more than single individuals who had the same level of internal conflict for the majority of the graphics. Further, in RQ12, the results supported behavior-based differences by parental status. Specifically, the results supported parents endorsing higher scores in comparison to non-parents who have equal levels of internal conflict. It is plausible to recommend changes to the current scale based on this finding, however caution should be taken because the significant findings are inconsistent in their graphical representation.

Quantitative Item Concerns. The above results, coupled with item-level significance findings for differences by demographic group, produce concern about Item 8, Item 6, Item 9, Item 3 and Item 2, respectively. These items produce a combination of visual and significant findings for at least one, and up to three, demographic groups. As mentioned, the combination of significant findings and visual differences is pertinent to concluding sound findings regarding DIF. Thus, these items have both (1) impact and practical application based on visual differences, and (2) support of significant differences, such that the difference is large enough to produce results that are unlikely to be due to chance. These items should be considered for elimination or modification, based on biases by

demographic group. An additional approach would be to run the primary analyses with and without the items of concern. The scale functioning of the Carlson et al. (2000) scale may be limited by the inclusion of items that reflect substantial differences. The differences mean that the scale is functioning differently based on who is taking the survey and thus, do not provide comparable results by demographic group. My recommendation would be to examine the items presented above in a follow-up study and if similar patterns exist, to remove the items from the work-family conflict scale or modify them to where demographic differences do not exist.

Qualitative Item Concerns. During the coding phase, it became clear that one of the qualitative items – Item 8 – was not clear to all participants. If individuals do not understand an item, it makes the results obtained from that item not reliable and impacts construct validity. Specifically, Item 8 had two types of responses that were attention-grabbing as being a concern. More specifically, a subset of the participants responded that they did not understand the question. For example,

I am not sure what that means actually and I don't know that I would state it that way. I act just as friendly as if I were talking to someone I love if that is what you mean.

This is a concern given that not understanding a question will lead to answering an option that is not relevant to the person, or “playing it safe” causing the participant to neither agree or disagree with the question. Some individuals did not outright state that they did not understand the question but their responses indicated misunderstanding such that the

response provided was not relevant to the topic in question. Similarly, a subset of the participants responded that the question was not applicable to them. However, these respondents answered the time- and strain-based work-family conflict items. Thus, it is not clear why a participant would respond with a “N/A” response when other forms of work-family conflict were applicable to them. It is possible that these individuals did not understand the question or the question is too far-fetched to be relevant to some individuals. Given the biased pattern found in the DIF results and the confusion surrounding the item discovered in the qualitative analyses, I would recommend Item 8 to be removed from further use in research and practical settings.

Total Information Curve. The total information curve provided a graphical pattern that was reflective of several Likert-type, continuous scales such that the most information was provided for the mid-levels of the theta scale. Information is described as understanding how the scale works, or how much information you get from the question/scale. It makes sense that the most information is provide at moderate to high levels of conflict for a scale that is measuring conflict. It would seem uncharacteristic to have a scale designed to predict conflict, predict best at levels where conflict was not present. Overall, the total information curve suggested a pattern that was consistent with expectations such that the scale was very successful for theta levels -2 to 2. Interestingly, the individual item-level information curves told a different story. The individual item-level curves suggest that behavior-based conflict items, do not provide sufficient information. Conversely, the time-based items suggest that a moderate level of

information is provided by the three subdimension items, and the strain-based items provide a substantial amount of information about the items in the scale. One substantive point here is that strain-based conflict items may be the most “meaningful,” followed by time-based items. Thus, these two forms of work-family conflict may warrant examination separately from the each other, and from behavior-based items. Overall, the scale shows relatively similar quality compared to other Likert-type scales. The quality of the strain-based and time-based items is promising. However, the behavior-based items posed some concern in the quality of information being obtained.

Overall, the findings suggest that interpretation differences do exist for various demographic groups – gender, age, marital status, and parental status. Particularly, interpretation differences were the most common for strain- and behavior-based items, which were also the items that reflected concerns based on qualitative data and, for behavior-based items, the information analyses. These findings may provide additional ammunition for focusing on time-based differences, rather than strain- and behavior-based differences. Although some inconsistencies exist in the quantitative and qualitative results, the qualitative results were not designed to directly address the quantitative findings and there is convincing evidence that probability of response options are different based on subgroup identification.

Implications

Based on the findings of the current study, there are some concerns surrounding the construct validity of work-family conflict. The intent of the current study was not to

criticize the Carlson et al. (2000) scale in particular. The scale was used as an example of a potentially broader concern. I do not necessarily advocate that people stop using the Carlson et al. (2000) scale as the same problems may be present in other work-family conflict measures.

To reiterate, construct validity is “the degree to which a test measures what it claims, or purports, to be measuring” (Brown, 1996, p.231). An assumption of construct validity is that any particular response option means the same thing for all individuals (i.e., is informing you about the same underlying construct). Some of the work-family conflict items violated the terms of construct validity. In lay terms, the interpretation of a subset of the work-family conflict items was found to vary by demographic group, potentially due to life experiences, which changes the measurement properties of the scale based on the demographic group answering the questions. These findings have important implications for research and practical implications.

Research implications derived from the current study can impact the way that researchers approach not only work-family conflict items in the future but also, other various psychological constructs. In research, the measures used may not actually be equivalent across different demographic groups. The results that are supportive of demographic differences in the way individuals interpret work-family conflict items contribute to the need for extensive methodological testing before a scale is deemed appropriate for research use. Researchers should seek to establish equivalence across a variety of measures, particularly those that may be sensitive to differences based on certain demographic characteristics. The results of this study demonstrate that the sole

use of Confirmatory Factor Analysis (CFA) in scale development is not sufficient. Rather, IRT should be used in addition to CFA in order to produce the most accurate representation of psychological constructs and their methodological properties. Items should be evaluated within a person's dataset to ensure consistency between responses by demographic group before mean comparisons are made.

Additionally, if items cannot be modified to reflect equal responses by demographic group, future research may need to either (1) use different scales for the various groupings, (2) review the results of the studies by demographic group to address that the subgroups may not be responding the same to the items or (3) run the primary analysis with and without the items in question to compare findings. This inability to make direct comparisons also has implications for previously conducted studies using the Carlson et al. (2000) scale. The mean differences found between demographics may be artificial differences found only due to the fact that real differences exist in the interpretation of the items. It is plausible to suggest re-evaluating the findings from large impact studies that have used the Carlson et al. (2000) scale to determine if the findings are a function of the scale itself or true population differences. As the scale stands today, I would encourage researchers to be very thoughtful in their use of and confidence in the work-family conflict items.

In line with the prior section, the supplementary ANOVA results conducted in the current study demonstrate that mean differences may not be a function of varying means but instead, a function of interpretation differences. With the strain-based variable being the most commonly significant finding, it is interesting because a subset of the strain-

based items (i.e., Item 6) posed challenges indicating DIF. If DIF exists as the analyses suggest, the mean differences found may not be due to true differences between demographic groups but instead, artificial differences created by a different understanding of the items (i.e., differences in the likelihood of responses given the same level of the construct). The analyses demonstrate that mean differences can exist both with and without DIF, and thus the importance of conducting IRT prior to running mean analyses becomes an important topic because there is no clear indication of whether the differences are true mean differences or artificial differences based solely on an ANOVA output.

A differential validity, or specifically a predictive validity, study may be beneficial in future research to examine the whole scale functioning compared to item functioning, where the items are selected from the IRT analysis. Specifically, it would be interesting to demonstrate that the items correlate to outcomes differently, such that less biased items predict better. All of the findings from the current study are magnified if there are differential validity concerns. If the items have a predictive relationship with critical outcome variables, the biases become a forefront issue to interpreting and reporting the results. Moreover, it is important to note that the demographic differences found in the current study cannot be controlled for, and must be addressed prior to any mean differences analyses. The biases produced in the current study occur prior to any analyses and are a function of a person's thoughts, and thus, holding the variable constant will not solve the issue.

It is important to note that several questions were not affected by DIF. For these items, there is further validation of the Carlson et al. (2000) scale and can continue to be used in research and practice with no negative consequence. For these items, the combination of responses across demographics is supported and encouraged if the research calls for that approach. Namely, the time-based work-family conflict items, and some strain-based work-family conflict items, performed well and were interpreted similarly across demographic groups.

In application, it is important to understand whether or not assessments are accurately capturing perceptions of work-family conflict. Organizations conducting assessments in order to inform interventions may not be sufficiently informed about the state of work-family conflict among employees if the items are being interpreted differently by demographic subgroups. Practice implications stemming from the current study include the need to approach work-family conflict issues in the applied world with a more tailored approach. One example stemming from the larger demographic issue is that if men and women are interpreting work-family conflict items differently, it is plausible to assume their definition and perceptions surrounding the issue also differ. Thus, when addressing work-family conflict with one demographic group versus another, supervisors will need to be sensitive to the various interpretations surrounding the construct and be able to adapt their technique based on a person's demographic group. Specifically, since strain- and behavior-based conflict produced the DIF of highest concern, if an employee is experiencing anxiety from work at home, and the supervisor may need to dig deeper into *who* the employee is, demographically. The *why* will help to

determine if the item needs to be eliminated from analyses. For example, a man and woman who both report a “7” for their level of conflict (i.e., the highest level of work-family conflict), may need to be addressed separately to determine if their conflict is actually equal, and if there are additional resources that one may need but that would be irrelevant for the other.

Additionally, various work-family conflict initiatives may need to be tailored to best fit a company’s demographic composition and may need additional alterations to be applicable to all. For example, young and middle-aged individuals may provide equivalent response options but their level of conflict may actually differ so one group (e.g., middle-aged) may need additional resources that would not have been obvious in mean comparisons. Thus, additional personal factors may need to be taken into account when implanting family-friendly practices. I would caution practical use of the current scale until research modifies items that may produce biases, especially for Items 6 and 8.

Lastly, the qualitative themes produced in the current study are an important implication moving forward because the responses provided a deeper understanding into work-family conflict and may aid in modifying the current items. Interestingly, the major categories were relatively consistent by demographic groups, as the highest rated themes tended to be similar but sometimes in a different order. Most of the comments were in line with the current literature that describes individuals proposed reasons for work-family conflict (e.g., long hours, disengagement). I was surprised by the large number of individuals who said that they did not have any interference. I would argue that most people have at least some conflict between their work and family lives, and thus, the

counter findings that reported a substantial amount of individuals not experiencing conflict was contrary to what I expected. A response that I did not expect was the individuals who cited that the behavior-based items were either (1) not applicable to them, or (2) they did not understand the question. This finding is critical as researchers move forward in further evaluating this, and other, work-family conflict scales.

Strengths and Limitations

A strength of the current study is the large, diverse sample used. Although many of the positives surrounding a large sample are noted in the contributions section, it is important to remember that several different demographics were able to be examined in the current study which is not typical of many prior work-family conflict studies. A large, diverse sample allows researchers, to generalize the findings of the current study to a larger population of individuals with confidence. The sample size of close to 700 participants allowed for data analyses to be conducted without any additional analyses or manipulations to the data.

The sample characteristics for the current study were as expected – majority women, married, and no children, with a sufficient distribution of ages – and appropriate for my purposes. Although the sample reached many demographics, it was beyond the scope of the current study to examine all potentially relevant demographic variables. Race/ethnicity and income differences are two demographics that would be pertinent to examine through IRT analyses in future studies. Additionally, future studies should consider evaluating other psychological scales using IRT methods.

A second strength of the current study is the multi-method design. So many studies today focus on cross-sectional, self-report data and although the use of longitudinal data is increasing, the field pertaining to work-family conflict is still lacking significantly in the robustness of our methodological approaches. The current study draws on calls by Kossek et al. (2011) and Allen et al. (2000) to add methodological rigor to the field through the use of qualitative data and better construct measurement. The combination of quantitative and qualitative data, provides insight into the work-family conflict scale not previously examined or sought after. For example, item-level analyses revealed that persons of different demographic standing are, in fact, interpreting items differently in some circumstances. Specifically, it is interesting that the strain- and behavior-based items are of the most concern, especially because the strain-based items are the most informative about individuals' level of work-family conflict. Similarly, three of the four demographic groups reported differences in their reasons for work-family conflict for strain- or behavior-based conflict (excluding parental status as time-based conflict was qualitatively significant for that subdimension). Thus, although the multi-method design was somewhat atypical and had its limitations, the results still produced findings that were relatively in line with the quantitative results. To my knowledge, none of above findings had been previously studied in the work-family conflict arena and thus, shed light on a previously unfamiliar space.

Although the multi-method design was a promising start for the work-family conflict literature, the current study only scratched the surface on demographic differences in work-family conflict items. The current study did not seek to re-develop

the Carlson et al. (2000) scale based on the results, but instead provided recommendations for approaching work-family conflict items methodologically. A future direction would be to apply the results found here, in conjunction with additional DIF analyses, to re-evaluate the current work-family conflict scales created to date. From my findings, I would recommend retaining the multidimensionality of the measure in interpretation of findings as the results seemed to differ across scales, specifically drawing attention to the strain- and behavior-based items. It is important to note that the scale was tested as a unidimensional scale, and interpreted as a multi-dimensional scale. Due to the limited number of items in the Carlson et al. (2000) scale, the scale required that all nine items were used to calculate the results. Due to this, the results may be confounded by using global theta to examine differences on the various types of conflict. Additionally, I would recommend modifying and/or removing Item 6 and Item 8, as they produced the most substantial DIF across the different demographic groups. Future research should pay special attention to the quality of behavior-based work-family conflict measures.

A second limitation of the current study was the use of only three qualitative questions instead of the entire work-family conflict scale. As mentioned, one item was chosen from each subdimension of work-family conflict to be assessed qualitatively. The choice to only use three items was based on time limitations of the current study. Future studies should evaluate qualitative response options for all work-family conflict items in the Carlson et al. (2000) scale. Additionally, qualitative results going forward should be conducted in a more comprehensive manner such that the researcher can probe for

additional details, specific examples, and dig further into the “*why*” behind a person’s response. Although the time commitment is extensive, I would recommend over the phone or in person interviews to fully understand the participants responses. The current study was limited in that, I was unable to contact individuals for more details and some of the responses were vague or unclear. It is also possible that the qualitative analyses capture thematic differences not detected by the DIF analyses, and vice versa. Thus extending the qualitative portion in future studies is a worthwhile investigation.

In line with the previous section, it is important to note that the quantitative and qualitative data were collected at the same time. This posed a limitation because the qualitative data was not derived from the quantitative data as a clear follow-up, nor was it designed to address the DIF findings. Thus, a limitation presented here is that the qualitative section was not a direct response to the quantitative question. Arguably, it would have been better to choose problematic items from the DIF tests or perhaps to contrast problematic with non-problematic items from within the same dimension. If the qualitative data was collected at a later time point, after the quantitative analyses were run, I more than likely would have chosen Items 2, 3, 6, 8, and 9 because those were the items that showed differences by DIF. I would have chosen to examine a subset of those rather than arbitrarily choosing the qualitative items. For example, Item 6 instead of Item 5 for the strain-based section would have been more in line with the quantitative results and may have shown alternative results.

Given the exploratory nature of the current study, theory was used only loosely to guide the formation of research questions and hypotheses. There was no theoretical

framework, outside the semi-inductive approach, that contributed to the current study. It is arguable that, given the findings of the current study, researchers should consider designing a study based more closely on theory that tests the DIF relationships formed within demographics. Specifically, researchers could use the findings from this study to guide further investigation through a more theory-driven study. Furthermore, the creation of profiles may be a logical next step in testing the DIF relationships by demographics. More specifically, it may make more sense to propose profiles of individuals – young and single versus married with children – to compare DIF results. The responses provided are most likely not a function of only one demographic but a combination of demographics that all work together to create a person's interpretation of the items.

A final limitation of the current study was the use of self-report data. Self-report data may have the tendency towards bias or fatigue which could potentially provide data that is not reflective of their true perceptions. With self-report data there is always the possibility of social desirability, or changing responses to fit expectations. Given that the data used in the current study was carefully examined for quality, there is reason to believe that self-report data is not a major concern. Additionally, Chan (2009) argues that although self-report biases happen occasionally, they are not common, and are of even less concern in demographic variables.

Conclusion

In conclusion, work-family conflict is a prevalent problem that can have major implications for the well-being of employees and the success of organizations. Research

has made extensive efforts to understand the outcomes and antecedents of work-family conflict; however, less attention has been devoted to truly understanding what work-family conflict means to individuals and how work-family measures function among different populations. The present study found evidence that demographic subgroups respond to work-family conflict items differently, at least to some degree and mainly for strain- and behavior-based work-family conflict. The current study provided initial evidence that one's demographic standing may impact responses to work-family conflict items. Researchers and practitioners should further seek to understand the unique experiences of work-family conflict among diverse samples of employees to best improve work-family conflict.

CHAPTER TWELVE

APPENDICES

APPENDIX A

TABLES

Table 1. DIF Example

	Men	Women
Discrimination $a =$	1.0	1.3
Difficulty $b =$	1.5	2.0
Guessing $c =$	0.0	0.0

Table 2. Difficulty Example

	Men	Women
Discrimination $a =$	2.0	2.0
Difficulty $b =$	2.0	-2.0
Guessing $c =$	0.0	0.0

Table 3. Discrimination Example

	Men	Women
Discrimination $a =$	0.1	2.0
Difficulty $b =$	0.5	0.5
Guessing $c =$	0.0	0.0

Table 4. CFA Estimates of Fit Indices

Model	χ^2	df	p	CFI	RMSEA
Three-dimensional model	77.19	24	0.00	.988	.061
One-dimensional model	1265.47	27	0.00	.712	.276

Notes

N = 681. CFA = Comparative Fit Index. RMSEA = Root Mean Square Error of Approximation.

Table 5a. Sample Characteristics

Demographic Variables

Variable	Women	Ages	Married	Children
Gender	59.0%	-	-	-
Age	-	18-71+	-	-
Marital Status	-	-	52.8%	-
Parental Status	-	-	-	59.2%

Table 5b. Sample Characteristics

Correlation Table

Item	Mean	SD	WFC 1	WFC 2	WFC 3	WFC 4	WFC 5	WFC 6	WFC 7	WFC 8	WFC 9
WFC 1	3.36	1.79	1	-	-	-	-	-	-	-	-
WFC 2	3.16	1.71	.778**	1	-	-	-	-	-	-	-
WFC 3	3.17	1.73	.823**	.777**	1	-	-	-	-	-	-
WFC 4	3.33	1.70	.611**	.634**	.594**	1	-	-	-	-	-
WFC 5	3.17	1.71	.562**	.590**	.528**	.820**	1	-	-	-	-
WFC 6	3.50	1.85	.591**	.590**	.574**	.772**	.789**	1	-	-	-
WFC 7	3.25	1.58	.353**	.408**	.374**	.435**	.448**	.462**	1	-	-
WFC 8	3.24	1.62	.352**	.350**	.326**	.385**	.407**	.415**	.647**	1	-
WFC 9	3.46	1.65	.387**	.347**	.344**	.432**	.437**	.430**	.638**	.685**	1

Table 6a. Differential Item Functioning Results: Gender

Men

Item	Discrimination a	S.E.	Difficulty b	S.E.
1	1.54	0.15	0.60	0.08
2	1.45	0.16	0.76	0.08
3	1.34	0.12	0.74	0.08
4	1.12	0.16	0.74	0.08
5	1.31	0.15	0.81	0.08
6	0.98	0.10	0.67	0.08
7	0.40	0.05	0.78	0.16
8	0.57	0.07	0.51	0.14
9	0.33	0.07	1.02	0.11

Table 6b. Differential Item Functioning Results: Gender

Women

Item	Discrimination a	S.E.	Difficulty b	S.E.
1	1.42	0.11	0.72	0.06
2	1.45	0.11	0.79	0.06
3	1.32	0.08	0.79	0.06
4	1.49	0.12	0.69	0.06
5	1.35	0.12	0.75	0.06
6	1.34	0.11	0.64	0.06
7	0.45	0.04	0.76	0.09
8	0.32	0.03	1.01	0.11
9	0.31	0.03	0.39	0.13

Table 6c. Differential Item Functioning Results: Gender

Item	Chi-square	df	p-value	Effect Size
1	0.42	1	0.52	8%
2	0.00	1	0.93	0%
3	0.01	1	0.87	1%
4	2.49	1	0.11	8%
5	0.05	1	0.81	2%
6	4.06	1	0.04*	7%
7	0.45	1	0.51	4%
8	26.44	1	0.00**	14%
9	0.11	1	0.74	9%

Notes

* Indicates significance level $p < .05$

** Indicates significance level $p < .001$

⁺ Indicates marginal significance level

Note: Effect size was estimated at the largest gap between groups.

Table 7a. Differential Item Functioning Results: Age

Middle

Item	Discrimination a	S.E.	Difficulty b	S.E.
1	1.18	0.11	0.84	0.08
2	1.34	0.13	1.01	0.07
3	1.12	0.10	0.99	0.08
4	1.02	0.11	0.92	0.08
5	1.00	0.12	0.99	0.08
6	1.08	0.09	0.86	0.08
7	0.30	0.03	1.00	0.14
8	0.43	0.05	0.56	0.12
9	0.25	0.04	0.78	0.12

Table 7b. Differential Item Functioning Results: Age

Old

Item	Discrimination a	S.E.	Difficulty b	S.E.
1	1.09	0.25	0.76	0.12
2	1.25	0.21	0.87	0.13
3	1.50	0.28	0.77	0.13
4	1.05	0.24	0.81	0.14
5	0.84	0.27	0.93	0.13
6	1.50	0.25	0.86	0.13
7	0.29	0.09	0.53	0.31
8	0.28	0.09	1.41	0.33
9	0.28	0.07	1.02	0.31

Table 7c. Differential Item Functioning Results: Age

Item	Chi-square	df	p-value	Effect Size
1	0.10	1	0.75	4%
2	0.52	1	0.70	8%
3	1.64	1	0.20	16%
4	0.01	1	0.88	4%
5	0.31	1	0.59	5%
6	2.15	1	0.14	6%
7	0.16	1	0.87	5%
8	2.33	1	0.12	18%
9	0.11	1	0.74	3%

Notes

* Indicates significance level $p < .05$

** Indicates significance level $p < .001$

⁺ Indicates marginal significance level

Note: Effect size was estimated at the largest gap between groups.

Table 7d. Differential Item Functioning Results: Age

Young

Item	Discrimination a	S.E.	Difficulty b	S.E.
1	0.90	0.09	0.44	0.08
2	0.93	0.10	0.49	0.08
3	0.74	0.06	0.60	0.08
4	0.91	0.11	0.44	0.08
5	0.93	0.11	0.51	0.07
6	0.76	0.09	0.32	0.08
7	0.27	0.04	0.98	0.16
8	0.21	0.03	0.90	0.20
9	0.26	0.04	0.29	0.19

Table 7e. Differential Item Functioning Results: Age

Middle

Item	Discrimination a	S.E.	Difficulty b	S.E.
1	0.96	0.11	0.51	0.09
2	1.03	0.12	0.76	0.08
3	0.90	0.09	0.72	0.09
4	0.75	0.10	0.63	0.08
5	0.73	0.10	0.61	0.10
6	0.78	0.09	0.58	0.08
7	0.24	0.03	0.67	0.17
8	0.35	0.04	0.10	0.15
9	0.19	0.04	0.40	0.13

Table 7f. Differential Item Functioning Results: Age

Item	Chi-square	df	p-value	Effect Size
1	0.18	1	0.67	3%
2	0.41	1	0.53	9%
3	1.78	1	0.18	5%
4	1.40	1	0.24	5%
5	2.18	1	0.14	6%
6	0.02	1	0.85	8%
7	0.38	1	0.55	5%
8	5.09	1	0.02*	18%
9	2.80	1	0.09 ⁺	9%

Notes

* Indicates significance level $p < .05$

** Indicates significance level $p < .001$

⁺ Indicates marginal significance level

Note: Effect size was estimated at the largest gap between groups.

Table 8a. Differential Item Functioning Results: Marital Status

Single

Item	Discrimination a	S.E.	Difficulty b	S.E.
1	1.06	0.10	0.79	0.08
2	1.25	0.13	0.85	0.08
3	0.80	0.06	0.80	0.08
4	0.99	0.10	0.68	0.09
5	1.05	0.12	0.75	0.08
6	0.78	0.07	0.54	0.08
7	0.30	0.05	1.04	0.15
8	0.21	0.03	1.12	0.17
9	0.27	0.04	-0.02	0.20

Table 8b. Differential Item Functioning Results: Marital Status

Married

Item	Discrimination a	S.E.	Difficulty b	S.E.
1	0.92	0.09	0.60	0.06
2	0.93	0.08	0.78	0.07
3	1.06	0.08	0.71	0.07
4	1.03	0.10	0.75	0.07
5	0.85	0.10	0.79	0.07
6	1.01	0.10	0.72	0.07
7	0.26	0.03	0.70	0.14
8	0.29	0.03	0.58	0.11
9	0.24	0.03	0.91	0.11

Table 8c. Differential Item Functioning Results: Marital Status

Item	Chi-square	df	p-value	Effect Size
1	1.41	1	0.23	9%
2	6.20	1	0.01*	8%
3	5.25	1	0.02*	7%
4	0.08	1	0.77	1%
5	1.98	1	0.16	4%
6	2.66	1	0.10 ⁺	9%
7	0.54	1	0.47	6%
8	2.17	1	0.14	9%
9	0.50	1	0.49	11%

Notes

* Indicates significance level $p < .05$

** Indicates significance level $p < .001$

⁺ Indicates marginal significance level

Note: Effect size was estimated at the largest gap between groups.

Table 9a. Differential Item Functioning Results: Parental Status

No Kids

Item	Discrimination a	S.E.	Difficulty b	S.E.
1	1.19	0.10	0.68	0.06
2	1.15	0.10	0.77	0.07
3	1.06	0.07	0.80	0.07
4	1.02	0.11	0.61	0.07
5	1.22	0.11	0.74	0.07
6	0.85	0.08	0.57	0.06
7	0.30	0.04	1.06	0.12
8	0.39	0.04	0.59	0.10
9	0.37	0.04	0.87	0.12

Table 9b. Differential Item Functioning Results: Parental Status

Kids

Item	Discrimination a	S.E.	Difficulty b	S.E.
1	1.18	0.12	0.62	0.08
2	1.36	0.12	0.83	0.08
3	1.11	0.09	0.75	0.08
4	1.26	0.13	0.85	0.08
5	1.10	0.13	0.89	0.08
6	1.46	0.14	0.83	0.08
7	0.33	0.04	0.67	0.12
8	0.27	0.03	0.56	0.15
9	0.22	0.04	0.70	0.14

Table 9c. Differential Item Functioning Results: Parental Status

Item	Chi-square	df	p-value	Effect Size
1	0.00	1	0.91	1%
2	1.47	1	0.22	6%
3	0.18	1	0.67	1%
4	1.32	1	0.25	14%
5	0.57	1	0.46	5%
6	10.16	1	0.00**	20%
7	0.15	1	0.70	5%
8	8.25	1	0.00**	8%
9	12.38	1	0.00**	13%

Notes

* Indicates significance level $p < .05$

** Indicates significance level $p < .001$

⁺ Indicates marginal significance level

Note: Effect size was estimated at the largest gap between groups.

Table 10a. Qualitative Themes

Time-based Work-family Conflict Themes

Theme	%	Example
1 Telework	4.71	I work from home, so sometimes I have to stay in or near my home office while everyone else is out doing things.
2 Miss Events	13.06	I work too much, sometimes I miss out on my kids' school activities.
3 Hours	15.21	I would like to spend more time with my family. I work a lot and my hours change often
4 24/7	2.69	Being an IT often means you are always on call should something happen. It can be hard to make life arrangements outside of work because of that
5 Weekends/Holidays	5.65	I am required to be at work on some holidays.
6 Scheduling	5.11	Schedule is not predictable.
7 Location	1.45	I live in a different state than my family
8 No Interference	41.59	I do participate in family activities
9 Disallow Interference	10.50	I never ever put work before my family no matter what.

Table 10b. Qualitative Themes

Strain-based Work-family Conflict Themes

Theme	%	Example
1 Physical	2.14	I am physically exhausted.
2 Colleagues/Clients	5.87	I have to deal with the public at my job so by the time I get home, I'm drained from having to pretend to care all day
3 Stressful Work	10.95	My work has a lot of stressful and demanding deadlines, and so I often feel so tired after work that I don't do things like go for a walk with the dogs or go for a run with my husband when I want to.
4 Disengagement	10.95	Work is pretty exhausting for me, so when I get home, all I want to do is relax alone in my bed for the remainder of the night.
5 Mental	10.41	My brain is often so tired from everything else I did that it's hard to shift once I get home to doing it all again for people I love.
6 Emotional	2.00	It takes a lot from me personally to do my job and I find I don't have the patience I should have dealing with things at home.
7 Energized	3.20	I feel like my life at home is what keeps me emotionally positive and upbeat, so it counters stuff at work so this isn't necessarily true.
8 No Interference	39.65	It doesn't affect my family activities
9 Disallow Interference	14.82	I chose disagree because I usually leave work at work and don't bring it home, in the same way I try not to take home problems to work

Table 10c. Qualitative Themes

Behavior-based Work-family Conflict Themes

Theme	%	Example
1 Behaviors/Tasks	11.71	I work in sales so trying to negotiate with family members like I do at work doesn't often work out well
2 Emotion/Personality	22.07	Brusqueness, efficiency, and an occasional sense of detachment can make me an effective employee but are anathema to intimacy.
3 Productive	18.62	Any behavior that is effective and necessary at work would spill over to other areas of life
4 No Interference	41.44	I behave in the same manner at work that I do at home.
5 Do Not Understand	3.60	I am not sure what that means actually and I don't know that I would state it that way. I act just as friendly as if I were talking to someone I love if that is what you mean.
6 N/A	2.55	I put disagree because it does not apply to my situation.

Table 11. Qualitative Analysis Chi-Square Results

Item	Chi-square	df	p-value
Gender 1	13.52	9	<i>n.s.</i>
Gender 5	14.43	9	0.10 ⁺
Gender 8	3.32	6	<i>n.s.</i>
Age 1	22.73	18	<i>n.s.</i>
Age 5	29.95	18	<i>n.s.</i>
Age 8	20.94	12	0.05*
Marital Status 1	4.35	9	<i>n.s.</i>
Marital Status 5	14.73	9	0.10 ⁺
Marital Status 8	4.48	6	<i>n.s.</i>
Parental Status 1	19.67	9	0.05*
Parental Status 5	13.06	9	<i>n.s.</i>
Parental Status 8	9.50	6	<i>n.s.</i>

Notes

* Indicates significance level $p < .05$

** Indicates significance level $p < .001$

⁺ Indicates marginal significance level

Table 12a. Summary of Findings

Gender

	RQ	Hypothesis	Qualitative	Visual*	Significance*
Time	N	N.S.	N		
Strain	P	P.S.	Y	4, 6	6
Behavior	P	P.S.	N	7, 8, 9	8

Notes

* Item numbers are listed to reflect differences

RQ: N = No findings to indicate differences; P = Partial findings to indicate differences;

Y = findings to indicate differences

Hypotheses: N.S. = not supported ; P.S. = partially supported; S = supported

Qualitative: N = No findings to indicate differences; P = Partial findings to indicate differences; Y = findings to indicate differences

Table 12b. Summary of Findings

Age

	RQ	Hypothesis	Qualitative	Visual*	Significance*
Time	P	N.S.	N	2 ² , 3 ^{1,2}	
Strain	Y	N.S.	N	4 ² , 5 ² , 6 ^{1,2}	
Behavior	Y	N.S.	Y	7 ^{1,2} , 8 ^{1,2} , 9 ^{1,2}	8 ² , 9 ²

Notes

* Item numbers are listed to reflect differences

RQ: N = No findings to indicate differences; P = Partial findings to indicate differences;

Y = findings to indicate differences

Hypotheses: N.S. = not supported ; P.S. = partially supported; S = supported

Qualitative: N = No findings to indicate differences; P = Partial findings to indicate differences; Y = findings to indicate differences

¹: Middle – Old DIF

²: Young – Middle DIF

Table 12c. Summary of Findings

Marital Status

	RQ	Hypothesis	Qualitative	Visual*	Significance*
Time	Y	P.S.	N	1, 2, 3	2, 3
Strain	P	N.S.	Y	5, 6	
Behavior	Y	P.S.	N	7, 8, 9	

Notes

* Item numbers are listed to reflect differences

RQ: N = No findings to indicate differences; P = Partial findings to indicate differences;

Y = findings to indicate differences

Hypotheses: N.S. = not supported ; P.S. = partially supported; S = supported

Qualitative: N = No findings to indicate differences; P = Partial findings to indicate differences; Y = findings to indicate differences

Table 12d. Summary of Findings

Parental Status

	RQ	Hypothesis	Qualitative	Visual*	Significance*
Time	N	N.S.	Y	2	
Strain	Y	N.S.	N	4, 5, 6	6
Behavior	Y	P.S.	N	7, 8, 9	8, 9

Notes

* Item numbers are listed to reflect differences

RQ: N = No findings to indicate differences; P = Partial findings to indicate differences;

Y = findings to indicate differences

Hypotheses: N.S. = not supported ; P.S. = partially supported; S = supported

Qualitative: N = No findings to indicate differences; P = Partial findings to indicate differences; Y = findings to indicate differences

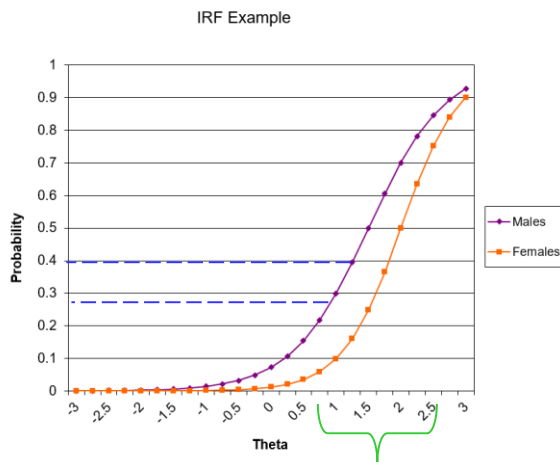
Table 13. ANOVA Findings

Demographic	Outcome	F-value	<i>df</i>	Significance
Gender	Time-based WFC	2.09	1	<i>n.s.</i>
	Strain-based WFC	8.65	1	$p < .01$
	Behavior-based WFC	0.23	1	<i>n.s.</i>
	Overall WFC	3.94	1	$p < .05$
Age	Time-based WFC	2.15	2	<i>n.s.</i>
	Strain-based WFC	4.70	2	$p < .01$
	Behavior-based WFC	0.62	2	<i>n.s.</i>
	Overall WFC	2.79	2	$p < .10$
Marital Status	Time-based WFC	0.07	1	<i>n.s.</i>
	Strain-based WFC	3.42	1	$p < .10$
	Behavior-based WFC	1.43	1	<i>n.s.</i>
	Overall WFC	0.18	1	<i>n.s.</i>
Parental Status	Time-based WFC	10.26	1	$p < .001$
	Strain-based WFC	0.33	1	<i>n.s.</i>
	Behavior-based WFC	4.51	1	$p < .05$
	Overall WFC	5.52	1	$p < .05$

APPENDIX B

FIGURES

Figure 1. DIF Example



Notes

The IRFs are shown in purple and orange (men = purple, women = orange). The discrimination parameter (a) is displayed with the blue dotted lines. The difficulty parameter (b) is displayed with the green open parentheses.

Figure 2. Difficulty Example



Figure 3. Discrimination Example

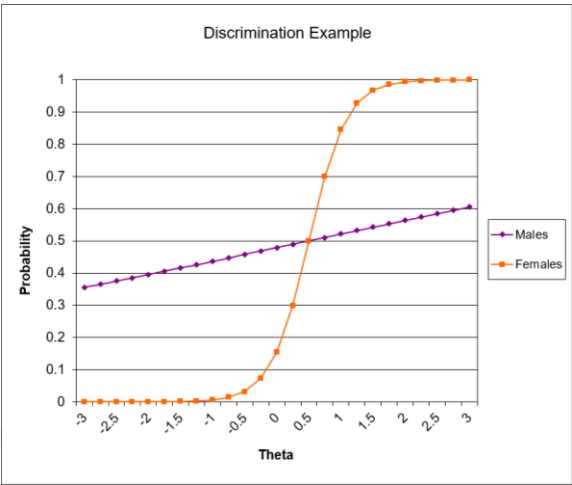


Figure 4a. CFA Factor Models

One-factor CFA model.

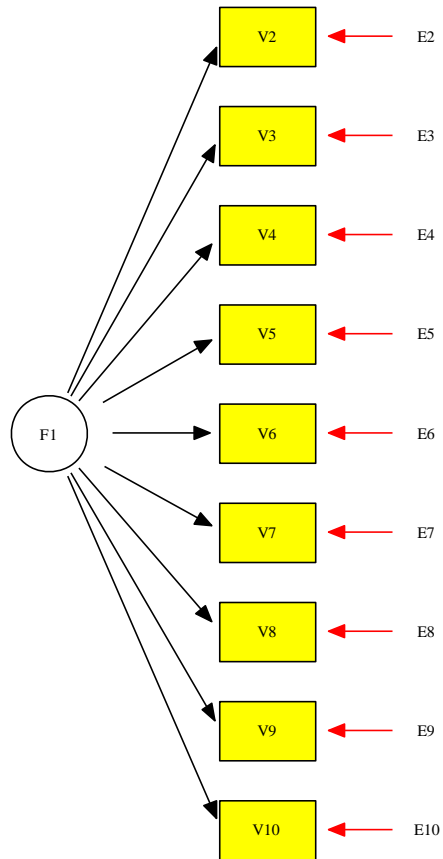


Figure X: EQS 6 cfa data2 Chi Sq.=1265.50 P=0.00 CFI=0.71 RMSEA=0.28

Figure 4b. CFA Factor Models

Three-factor CFA model.

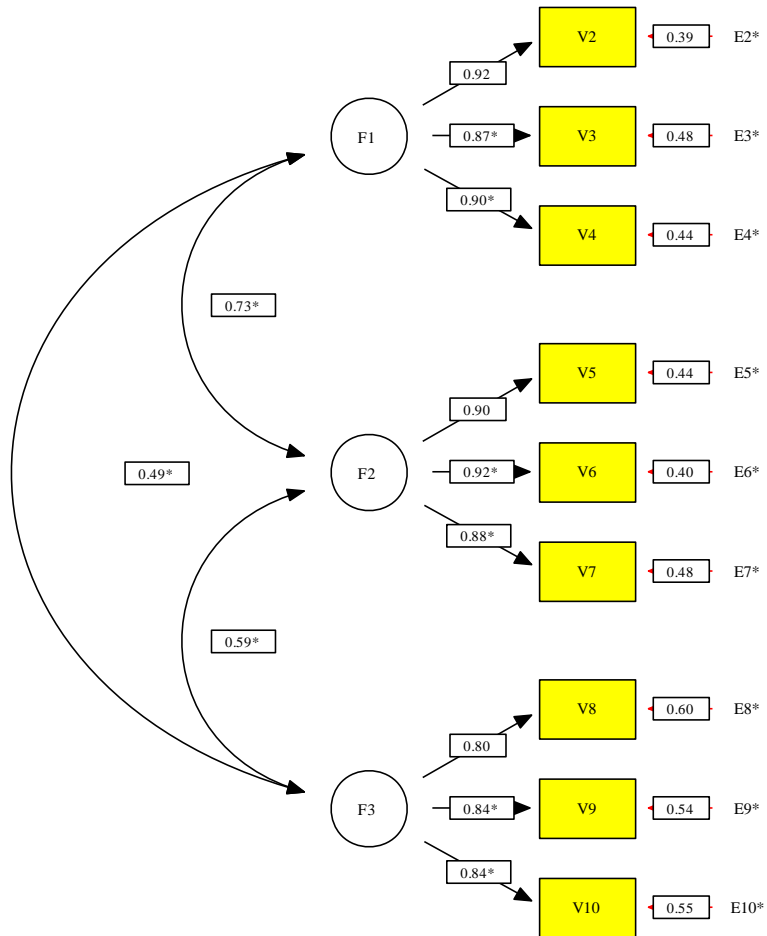


Figure X: EQS 6 cfa data-1 Chi Sq.=77.19 P=0.00 CFI=0.99 RMSEA=0.06

Figure 5. Total Information Curve

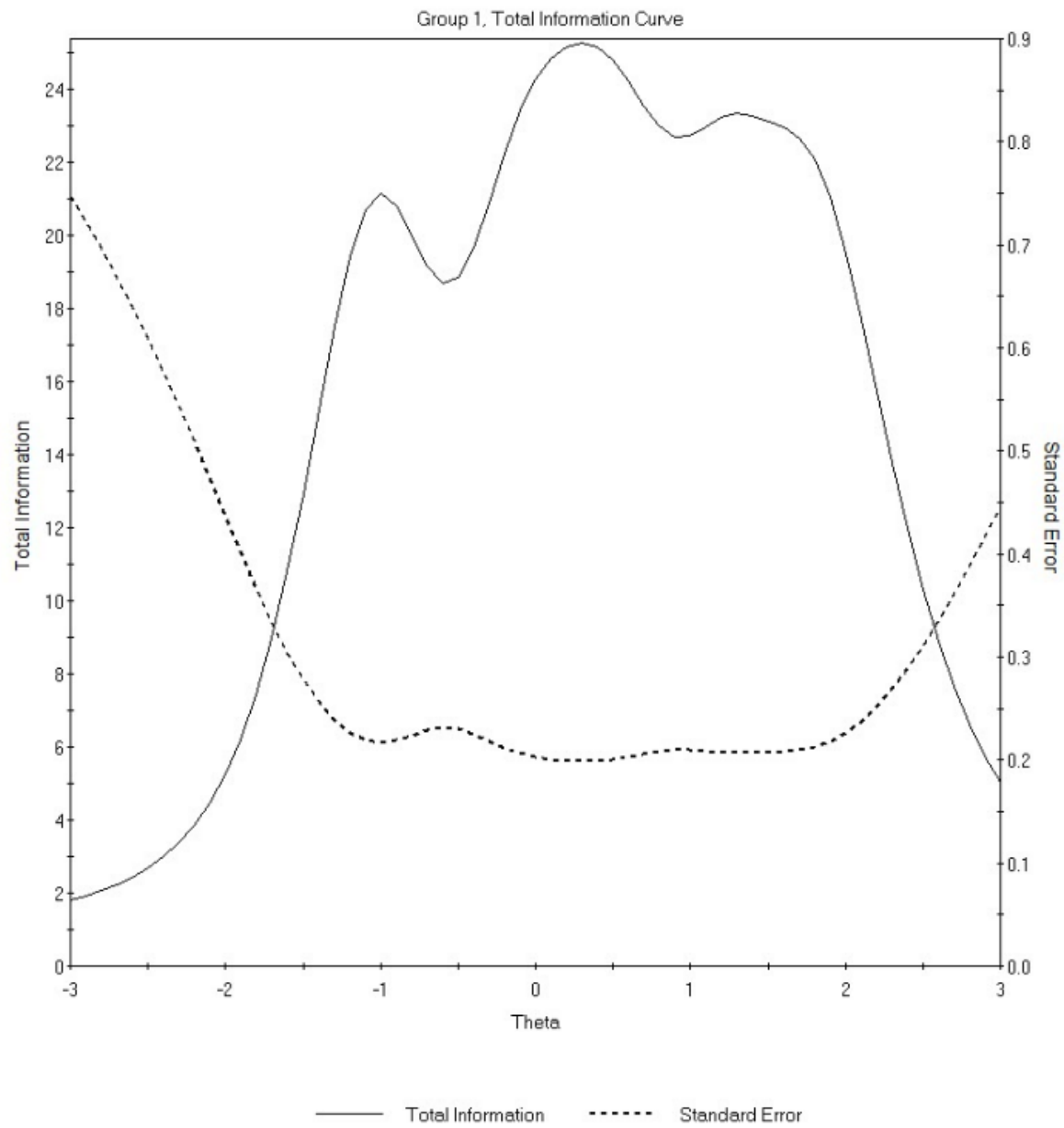
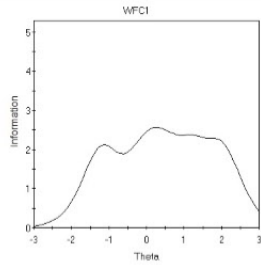
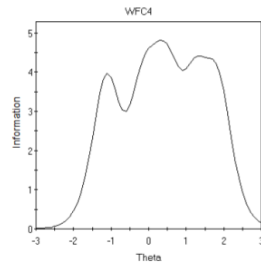


Figure 6. Item-Level Information

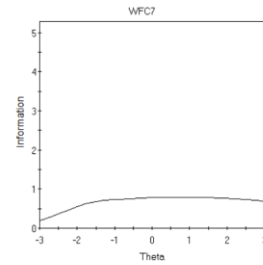
Item 1



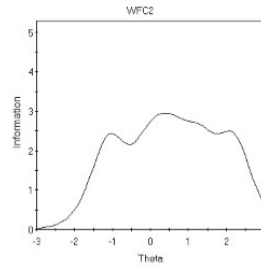
Item 4



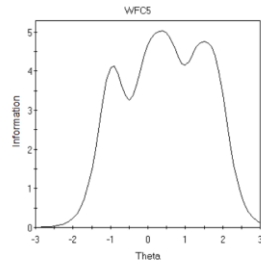
Item 7



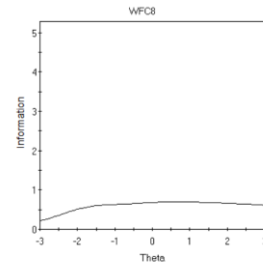
Item 2



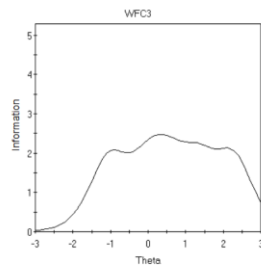
Item 5



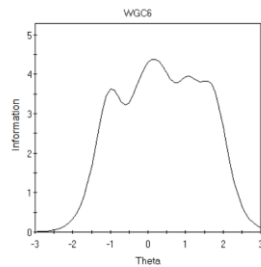
Item 8



Item 3



Item 6



Item 9

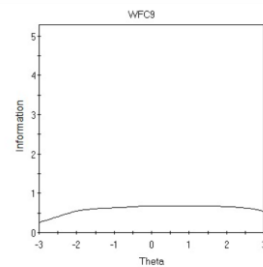


Figure 7a. Differential Item Functioning: Gender

Item 1: My work keeps me from my family activities more than I would like

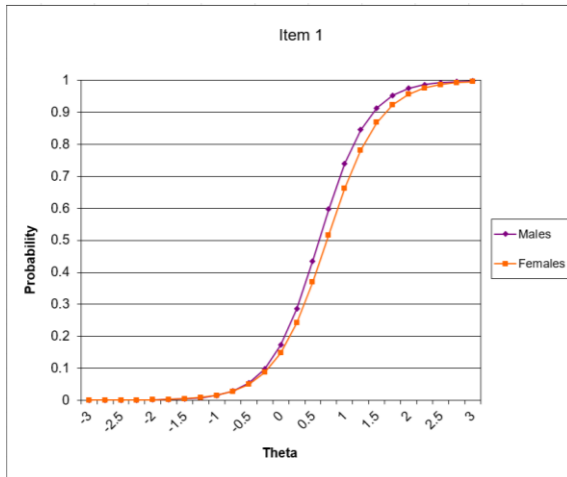


Figure 7b. Differential Item Functioning: Gender

Item 2: The time I must devote to my job keeps me from participating equally in household responsibilities and activities

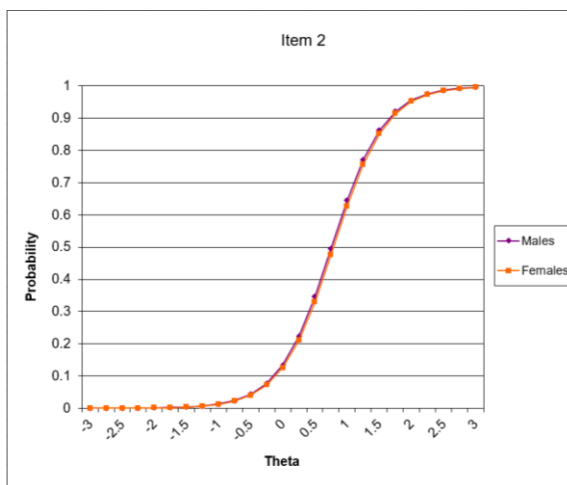


Figure 7c. Differential Item Functioning: Gender

Item 3: I am often so emotionally drained when I get home from work that it prevents me from contributing to my family

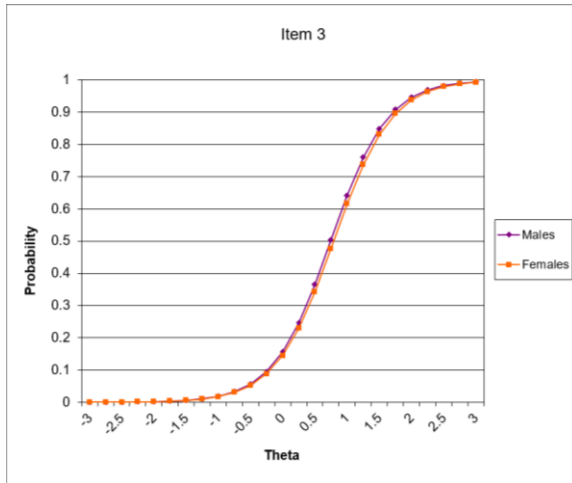


Figure 7d. Differential Item Functioning: Gender

Item 4: When I get home from work I am often too frazzled to participate in family activities/responsibilities

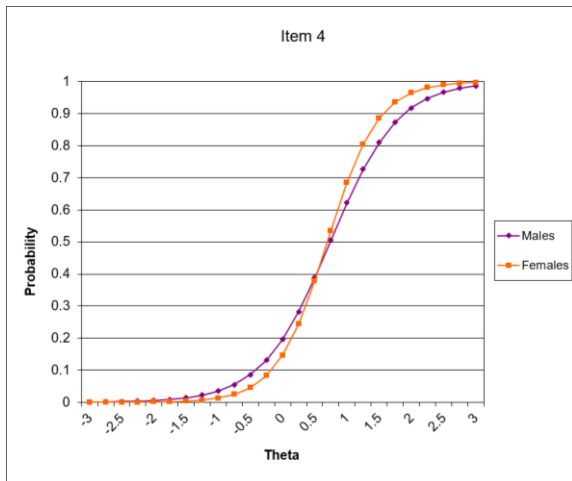


Figure 7e. Differential Item Functioning: Gender

Item 5: I am often so emotionally drained when I get home from work that it prevents me from contributing to my family

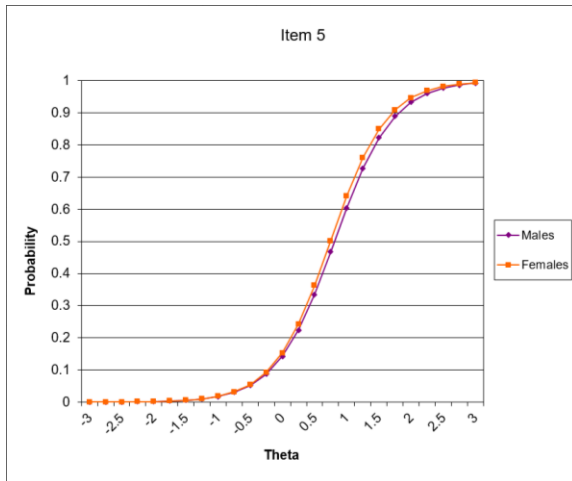
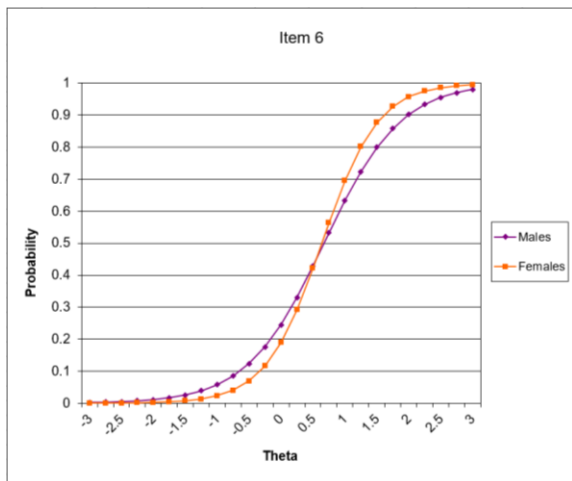


Figure 7f. Differential Item Functioning: Gender

Item 6: Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy



Notes

Item 6 is significant at $p < .05$

Figure 7g. Differential Item Functioning: Gender

Item 7: The problem-solving behaviors I use in my job are not effective in resolving problems at home

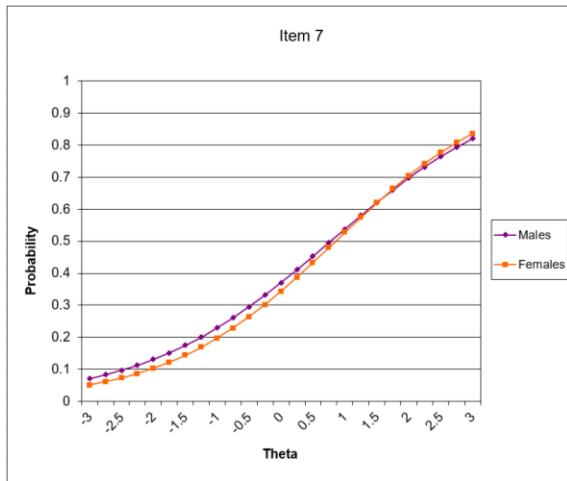
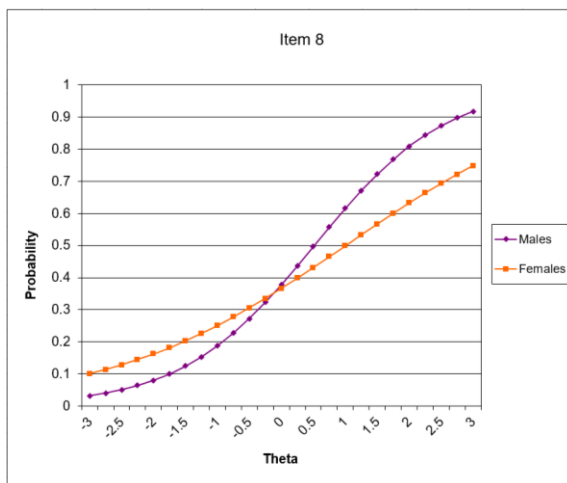


Figure 7h. Differential Item Functioning: Gender

Item 8: Behavior that is effective and necessary for me at work would be counterproductive at home



Notes

Item 6 is significant at $p < .001$

Figure 7i. Differential Item Functioning: Gender

Item 9: The behaviors I perform that make me effective at work do not help me to be a better parent and spouse

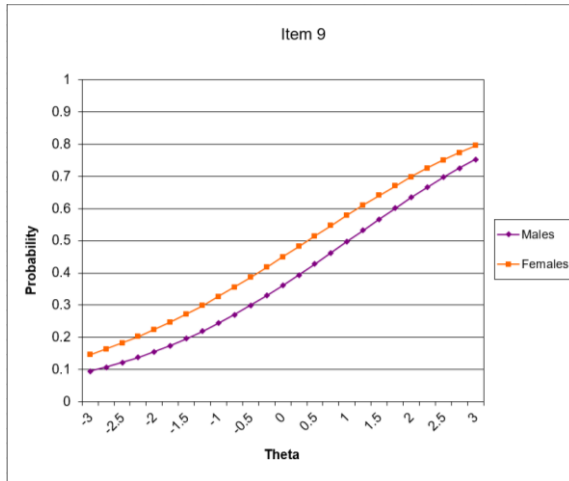


Figure 8a. Differential Item Functioning: Age

Item 1: My work keeps me from my family activities more than I would like

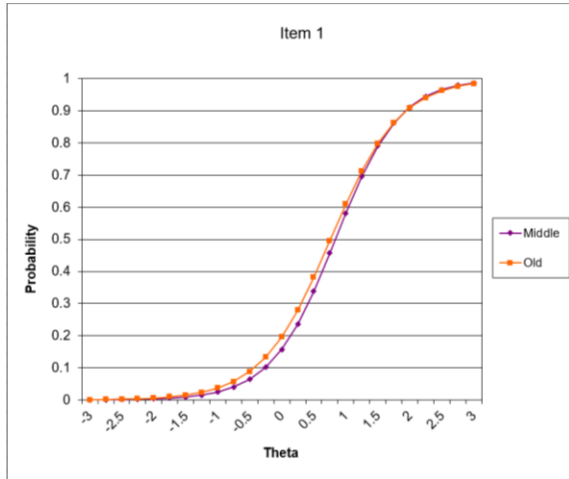


Figure 8b. Differential Item Functioning: Age

Item 2: The time I must devote to my job keeps me from participating equally in household responsibilities and activities

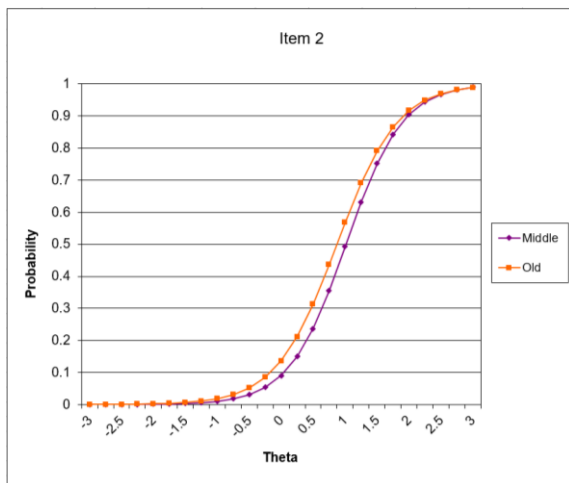


Figure 8c. Differential Item Functioning: Age

Item 3: I am often so emotionally drained when I get home from work that it prevents me from contributing to my family

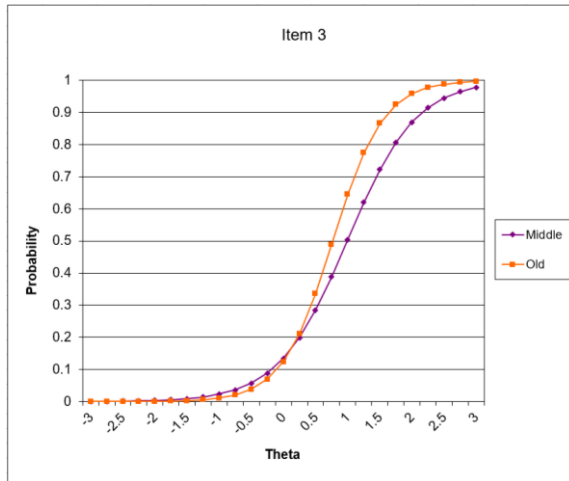


Figure 8d. Differential Item Functioning: Age

Item 4: When I get home from work I am often too frazzled to participate in family activities/responsibilities

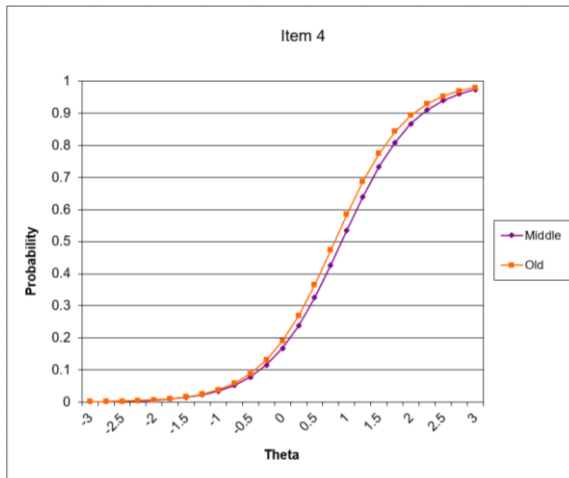


Figure 8e. Differential Item Functioning: Age

Item 5: I am often so emotionally drained when I get home from work that it prevents me from contributing to my family

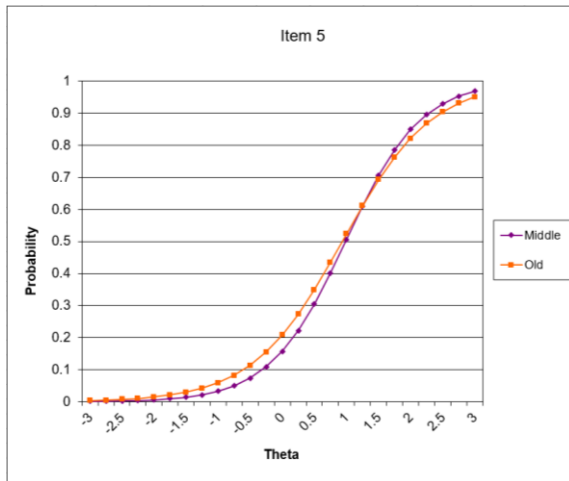


Figure 8f. Differential Item Functioning: Age

Item 6: Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy

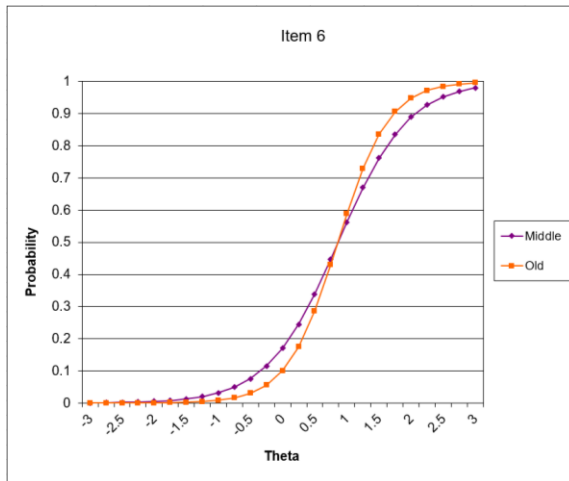


Figure 8g. Differential Item Functioning: Age

Item 7: The problem-solving behaviors I use in my job are not effective in resolving problems at home

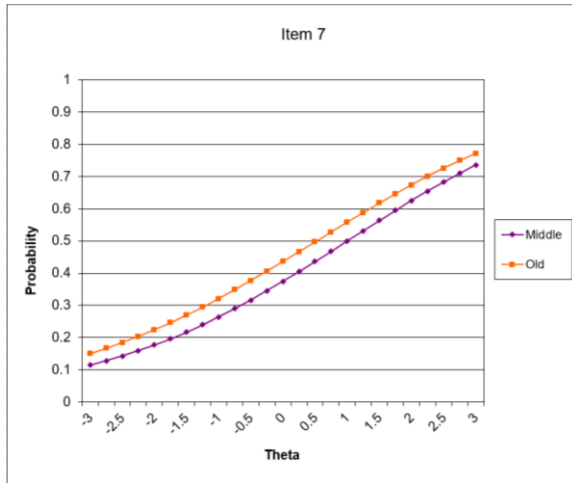


Figure 8h. Differential Item Functioning: Age

Item 8: Behavior that is effective and necessary for me at work would be counterproductive at home

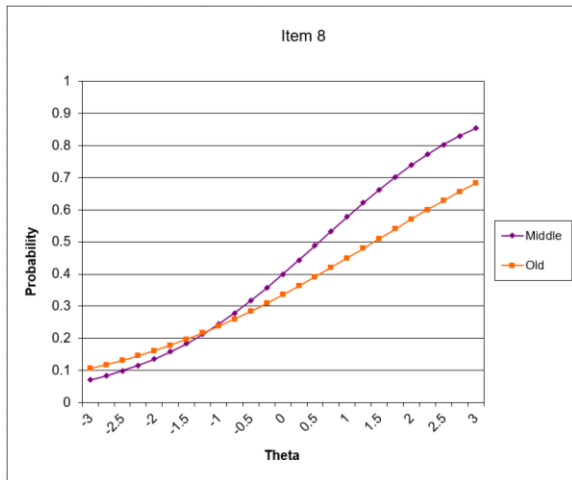


Figure 8i. Differential Item Functioning: Age

Item 9: The behaviors I perform that make me effective at work do not help me to be a better parent and spouse

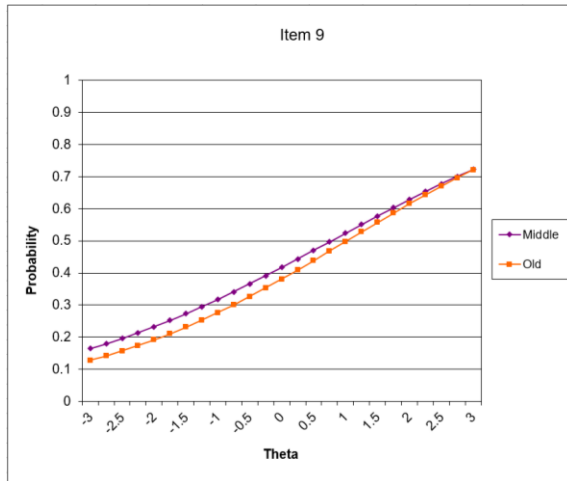


Figure 8j. Differential Item Functioning: Age

Item 1: My work keeps me from my family activities more than I would like

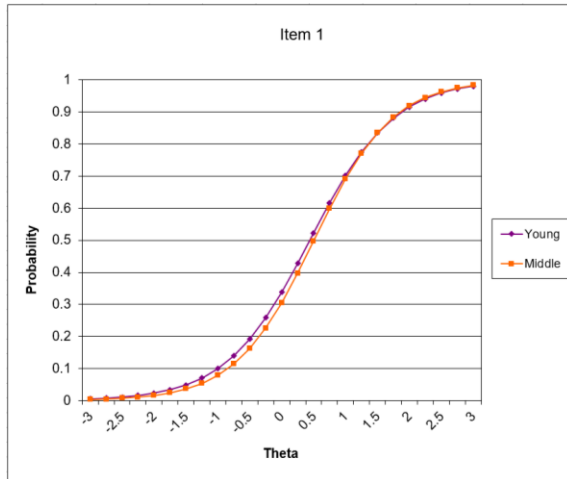


Figure 8k. Differential Item Functioning: Age

Item 2: The time I must devote to my job keeps me from participating equally in household responsibilities and activities

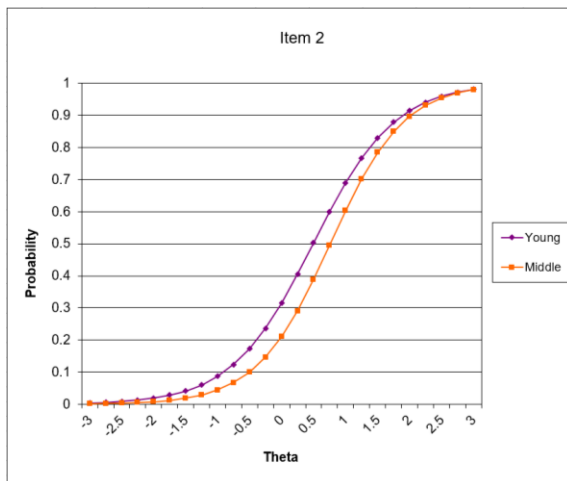


Figure 8l. Differential Item Functioning: Age

Item 3: I am often so emotionally drained when I get home from work that it prevents me from contributing to my family

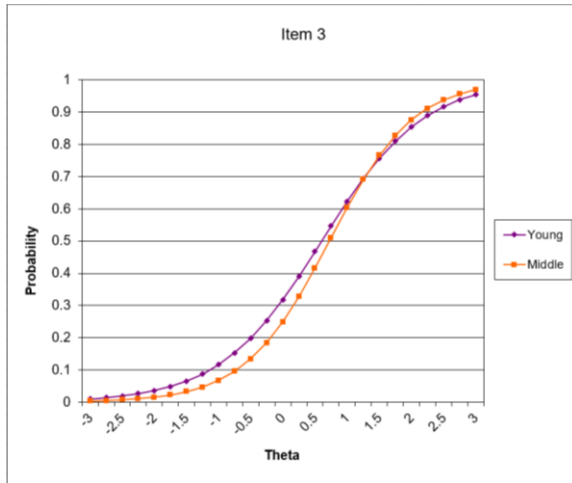


Figure 8m. Differential Item Functioning: Age

Item 4: When I get home from work I am often too frazzled to participate in family activities/responsibilities

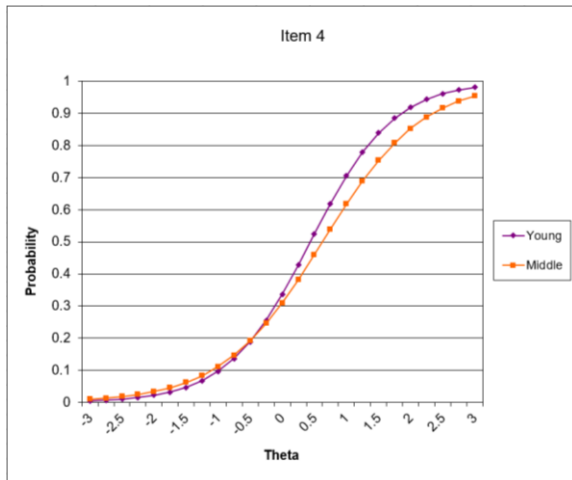


Figure 8n. Differential Item Functioning: Age

Item 5: I am often so emotionally drained when I get home from work that it prevents me from contributing to my family

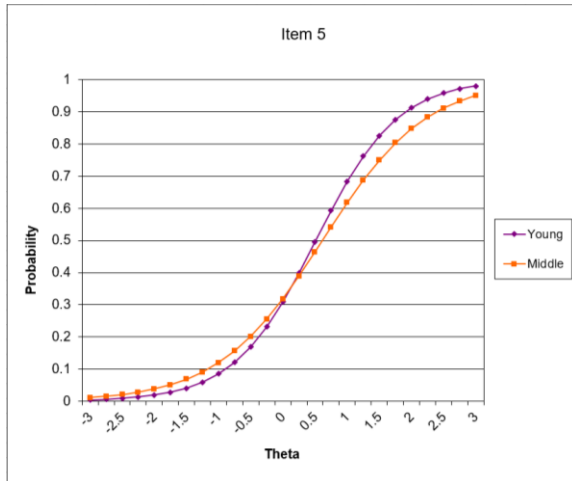


Figure 8o. Differential Item Functioning: Age

Item 6: Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy

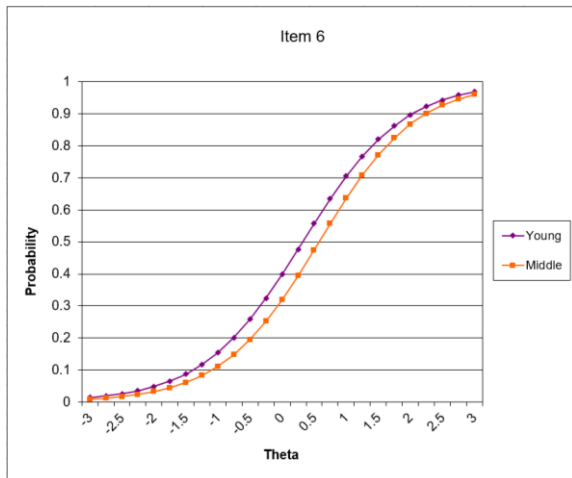


Figure 8p. Differential Item Functioning: Age

Item 7: The problem-solving behaviors I use in my job are not effective in resolving problems at home

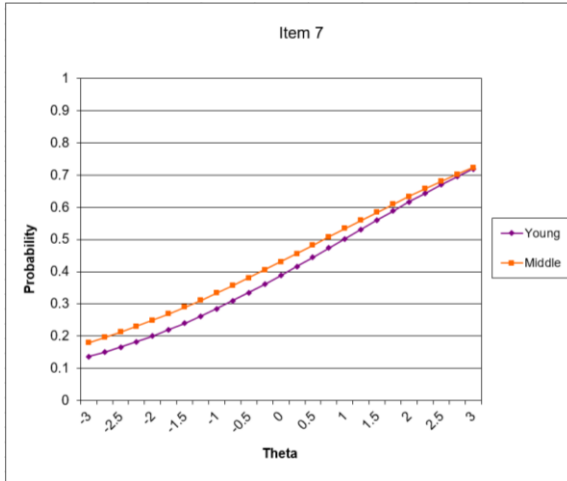
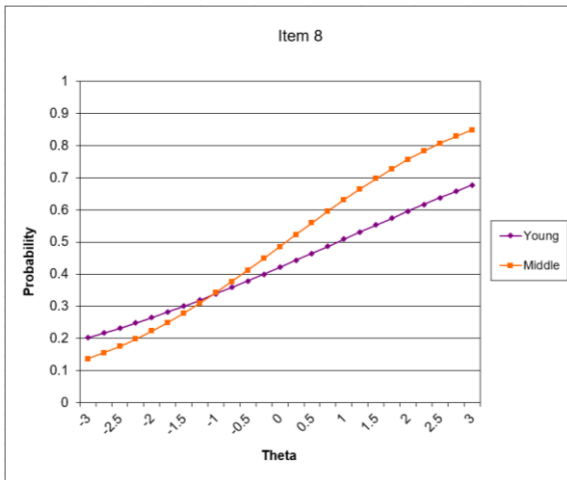


Figure 8q. Differential Item Functioning: Age

Item 8: Behavior that is effective and necessary for me at work would be counterproductive at home

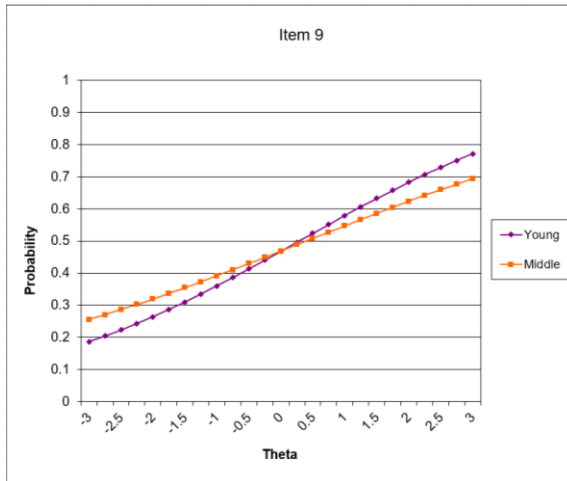


Notes

Item 8 is significant at $p < .05$

Figure 8r. Differential Item Functioning: Age

Item 9: The behaviors I perform that make me effective at work do not help me to be a better parent and spouse



Notes

Item 9 is marginally significant

Figure 9a. Differential Item Functioning: Marital Status

Item 1: My work keeps me from my family activities more than I would like

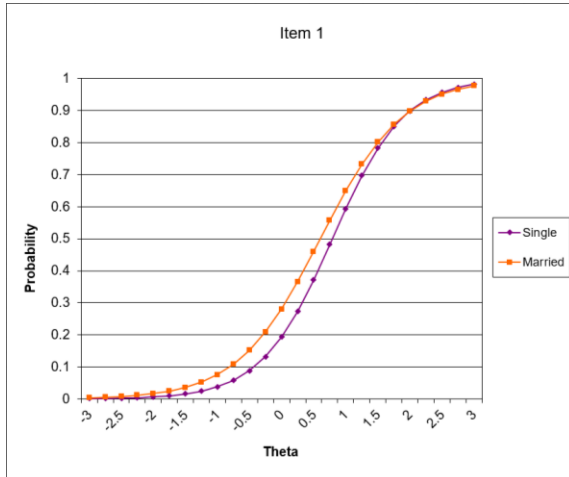
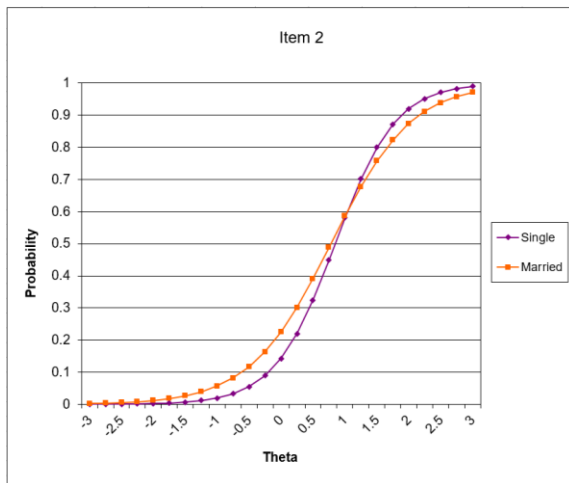


Figure 9b. Differential Item Functioning: Marital Status

Item 2: The time I must devote to my job keeps me from participating equally in household responsibilities and activities

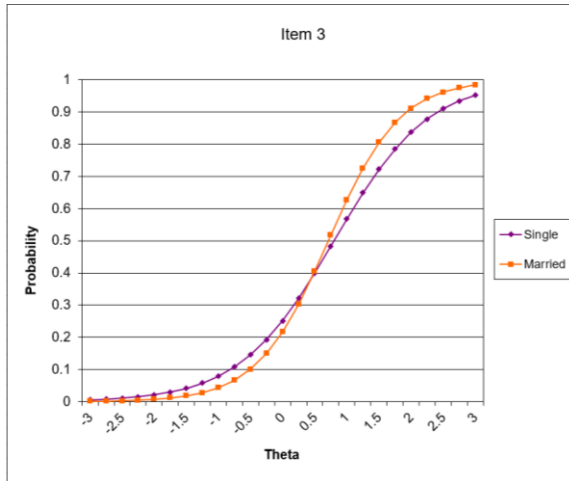


Notes

Item 2 is significant at $p < .05$

Figure 9c. Differential Item Functioning: Marital Status

Item 3: I am often so emotionally drained when I get home from work that it prevents me from contributing to my family



Notes

Item 3 is significant at $p < .005$

Figure d. Differential Item Functioning: Marital Status

Item 4: When I get home from work I am often too frazzled to participate in family activities/responsibilities

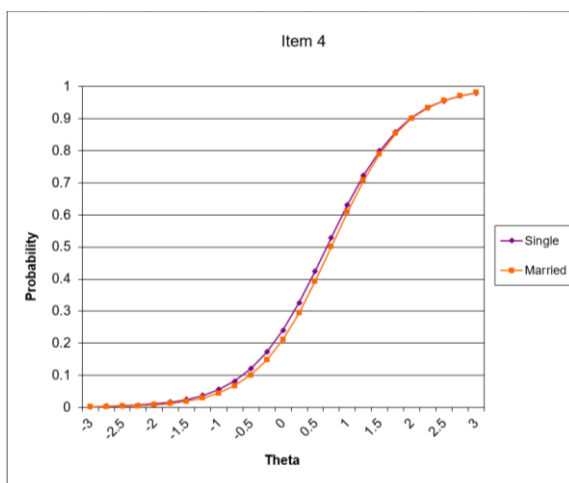


Figure 9e. Differential Item Functioning: Marital Status

Item 5: I am often so emotionally drained when I get home from work that it prevents me from contributing to my family

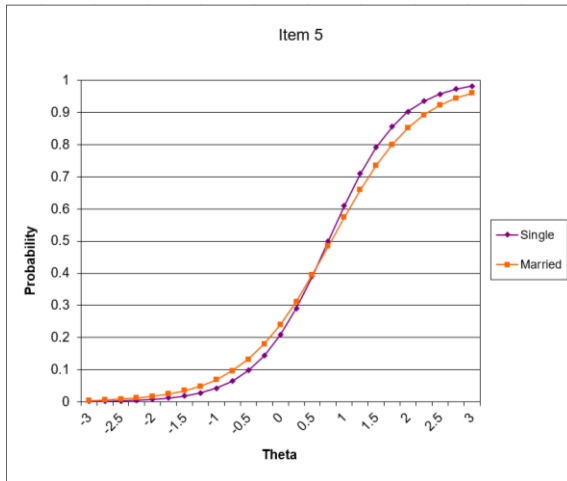
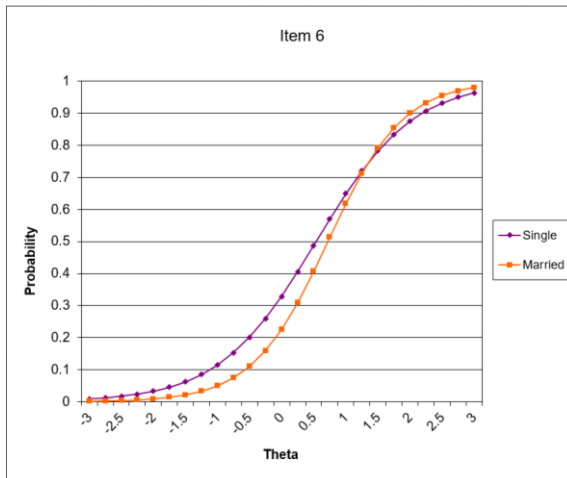


Figure 9f. Differential Item Functioning: Marital Status

Item 6: Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy



Notes

Item 6 is marginally significant

Figure 9g. Differential Item Functioning: Marital Status

Item 7: The problem-solving behaviors I use in my job are not effective in resolving problems at home

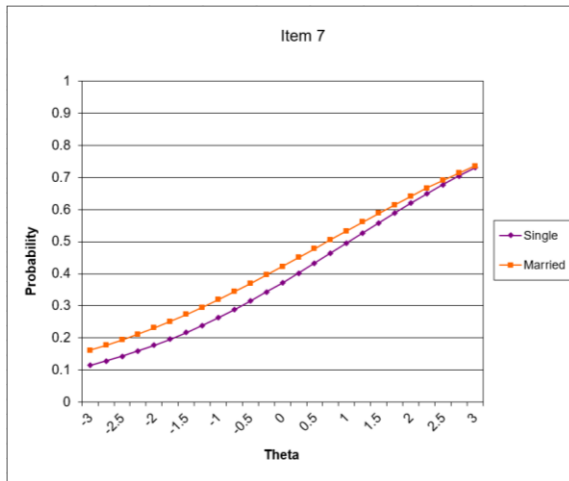


Figure 9h. Differential Item Functioning: Marital Status

Item 8: Behavior that is effective and necessary for me at work would be counterproductive at home

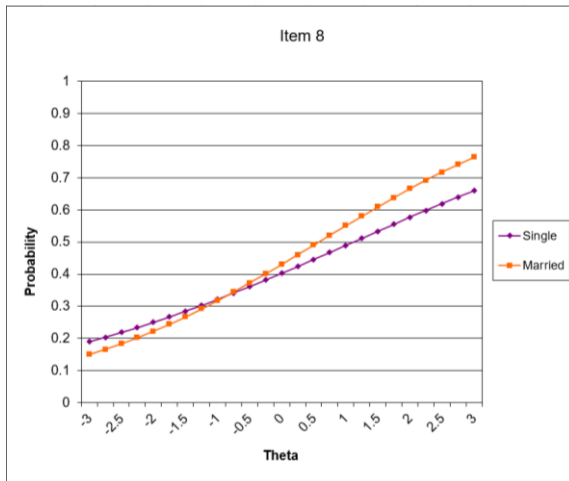


Figure 9i. Differential Item Functioning: Marital Status

Item 9: The behaviors I perform that make me effective at work do not help me to be a better parent and spouse

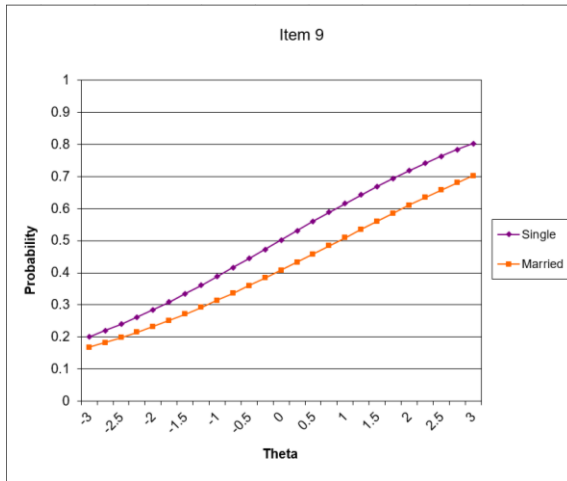


Figure 10a. Differential Item Functioning: Parental Status

Item 1: My work keeps me from my family activities more than I would like

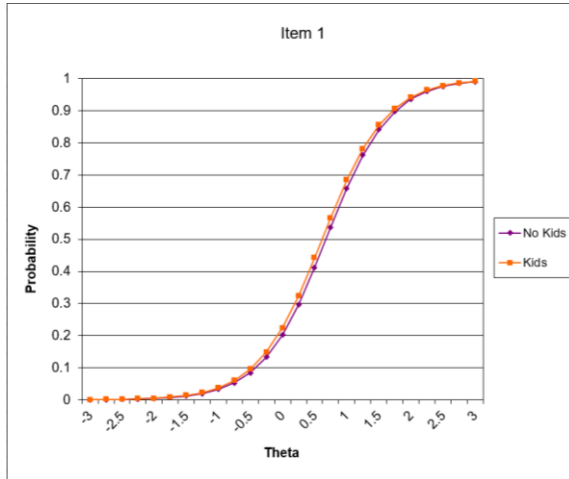


Figure 10b. Differential Item Functioning: Parental Status

Item 2: The time I must devote to my job keeps me from participating equally in household responsibilities and activities

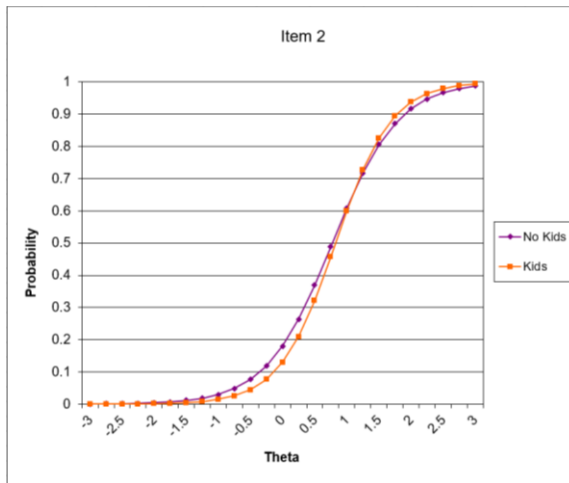


Figure 10c. Differential Item Functioning: Parental Status

Item 3: I am often so emotionally drained when I get home from work that it prevents me from contributing to my family

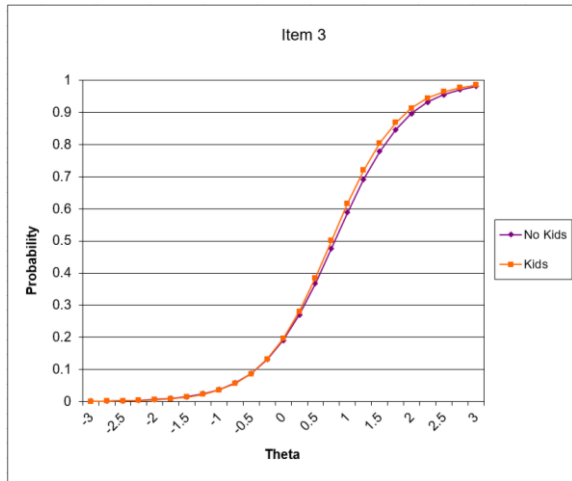


Figure 10d. Differential Item Functioning: Parental Status

Item 4: When I get home from work I am often too frazzled to participate in family activities/responsibilities

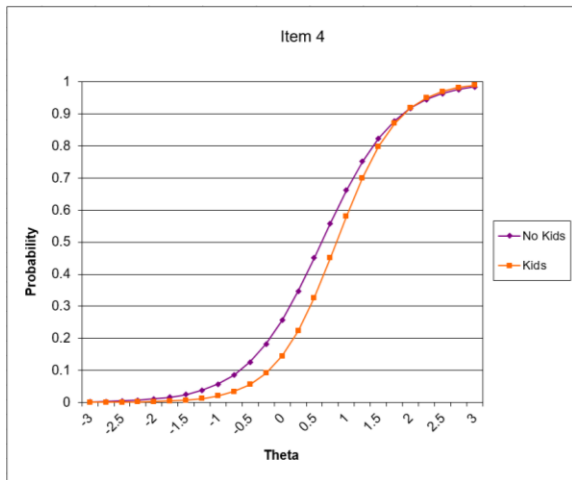


Figure 10e. Differential Item Functioning: Parental Status

Item 5: I am often so emotionally drained when I get home from work that it prevents me from contributing to my family

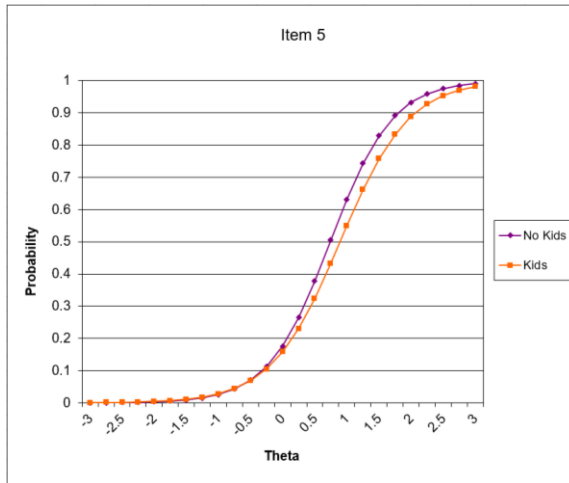
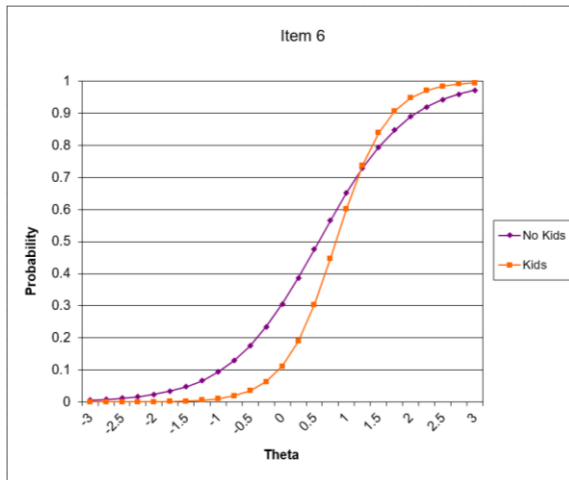


Figure 10f. Differential Item Functioning: Parental Status

Item 6: Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy



Notes

Item 6 is significant at $p < .001$

Figure 10g. Differential Item Functioning: Parental Status

Item 7: The problem-solving behaviors I use in my job are not effective in resolving problems at home

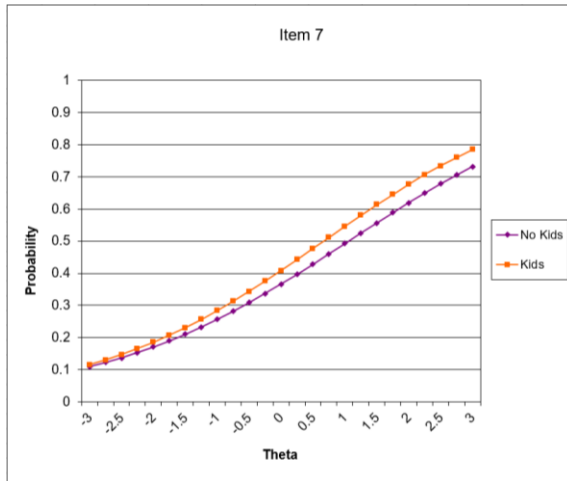
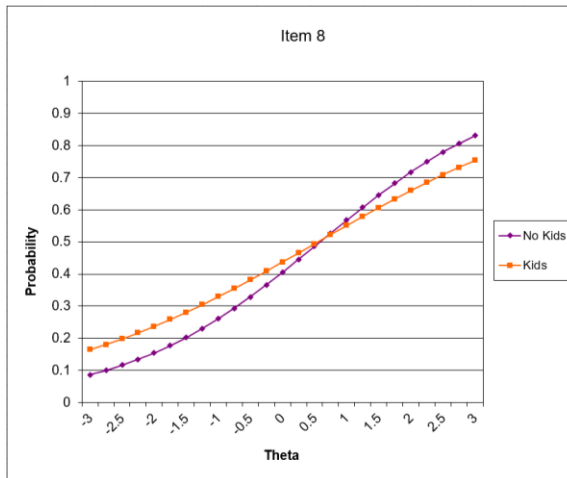


Figure 10h. Differential Item Functioning: Parental Status

Item 8: Behavior that is effective and necessary for me at work would be counterproductive at home

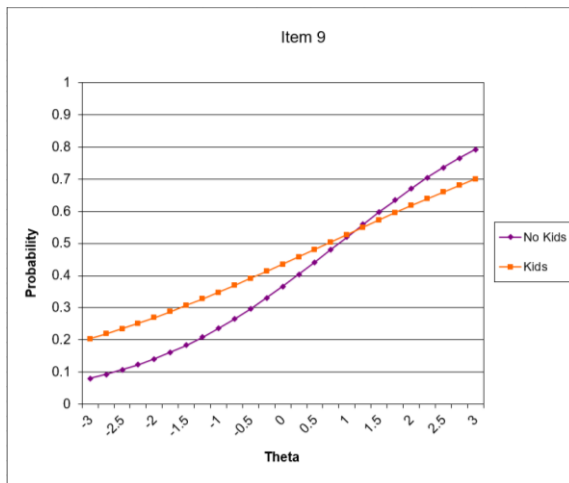


Notes

Item 8 is significant at $p < .001$

Figure 10i. Differential Item Functioning: Parental Status

Item 9: The behaviors I perform that make me effective at work do not help me to be a better parent and spouse



Notes

Item 9 is significant at $p < .001$

APPENDIX C HYPOTHESES

SUMMARY OF HYPOTHESES

Gender

Research Questions

- 1) Given equal levels of theta, do men and women respond differently to time-based work-family conflict items?
 - a. Do men and women who respond differently to time-based work-family conflict items do so for the same reasons?
- 2) Given equal levels of theta, do men and women respond differently to strain-based work-family conflict items?
 - a. Do men and women who respond differently to strain-based work-family conflict items do so for the same reasons?
- 3) Given equal levels of theta, do men and women respond differently to behavior-based work-family conflict items?
 - a. Do men and women who respond differently to behavior-based work-family conflict items do so for the same reasons?

Hypotheses

Hypothesis 1a: Given equal levels of theta, men will be more likely to endorse (i.e., circle a higher response option) time-based work-family conflict items.

Hypothesis 1b: Given equal levels of theta, women will be more likely to endorse (i.e., circle a higher response option) strain-based work-family conflict items.

Hypothesis 1c: Given equal levels of theta, men will be more likely to endorse (i.e., circle a higher response option) behavior-based work-family conflict

items.

Age

Research Questions

- 4) Given equal levels of theta, do young, middle, and older employees respond differently to time-based work-family conflict items?
 - a. Do young, middle, and older employees who respond differently to time-based work-family conflict items do so for the same reasons?
- 5) Given equal levels of theta, do young, middle, and older employees respond differently to strain-based work-family conflict items?
 - a. Do young, middle, and older employees who respond differently to strain-based work-family conflict items do so for the same reasons?
- 6) Given equal levels of theta, do young, middle, and older employees respond differently to behavior-based work-family conflict items?
 - a. Do young, middle, and older employees who respond differently to behavior-based work-family conflict items do so for the same reasons?

Hypotheses

Hypothesis 2a: Given equal levels of theta, middle-aged individuals will be more likely to endorse (i.e., circle a higher response option) time-based work-family conflict items.

Hypothesis 2b: Given equal levels of theta, older individuals will be less likely to endorse (i.e., circle a higher response option) strain-based work-family conflict items.

Hypothesis 2c: Given equal levels of theta, younger individuals will be less likely to endorse (i.e., circle a higher response option) behavior-based work-family conflict items.

Marital Status

Research Questions

- 7) Given equal levels of theta, do single, married, and previously married employees respond differently to time-based work-family conflict items?
 - a. Do single, married, and previously married employees who respond differently to time-based work-family conflict items do so for the same reasons?
- 8) Given equal levels of theta, do single, married, and previously married employees respond differently to strain-based work-family conflict items?
 - a. Do single, married, and previously married employees who respond differently to strain-based work-family conflict items do so for the same reasons?
- 9) Given equal levels of theta, do single, married, and previously married employees respond differently to behavior-based work-family conflict items?
 - a. Do single, married, and previously married employees who respond differently to behavior-based work-family conflict items do so for the same reasons?

Hypotheses

Hypothesis 3a: Given equal levels of theta, married individuals will be more

likely to endorse (i.e., circle a higher response option) time-based work-family conflict items.

Hypothesis 3b: Given equal levels of theta, married individuals will be more likely to endorse (i.e., circle a higher response option) strain-based work-family conflict items.

Hypothesis 3c: Given equal levels of theta, married individuals will be more likely to endorse (i.e., circle a higher response option) behavior-based work-family conflict items.

Parental Status

Research Questions

10) Given equal levels of theta, do employees with and without children respond differently to time-based work-family conflict items?

a. Do employees with and without children who respond differently to time-based work-family conflict items do so for the same reasons?

11) Given equal levels of theta, do employees with and without children respond differently to strain-based work-family conflict items?

a. Do employees with and without children who respond differently to strain-based work-family conflict items do so for the same reasons?

12) Given equal levels of theta, do employees with and without children respond differently to behavior-based work-family conflict items?

a. Do employees with and without children who respond differently to behavior-based work-family conflict items do so for the same reasons?

Hypotheses

Hypothesis 4a: Given equal levels of theta, parents will be more likely to endorse (i.e., circle a higher response option) time-based work-family conflict items.

Hypothesis 4b: Given equal levels of theta, parents will be more likely to endorse (i.e., circle a higher response option) strain-based work-family conflict items.

Hypothesis 4c: Given equal levels of theta, parents will be more likely to endorse (i.e., circle a higher response option) behavior-based work-family conflict items.

APPENDIX D
SURVEY ITEMS

Work-family Conflict

Carlson, Kacmar, Williams

(2000)

Instructions: "Please rate the degree to which you feel that you experience conflict represented in each of the items. Note: ""Family"" can be defined as persons related by biological ties, marriage, social custom or adoption, including both immediate and extended family members (e.g. spouse, parent, child, sibling, in-law, and so forth)"

1. My work keeps me from my family activities more than I would like*
2. The time I must devote to my job keeps me from participating equally in household responsibilities and activities
3. I have to miss family activities due to the amount of time I must spend on work responsibilities
4. When I get home from work I am often too frazzled to participate in family activities/responsibilities
5. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family*
6. Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy
7. The problem-solving behaviors I use in my job are not effective in resolving problems at home
8. Behavior that is effective and necessary for me at work would be counterproductive at home*

9. The behaviors I perform that make me effective at work do not help me to be a better parent and spouse

**We are looking to find out more about why you answered the way that you did. In the box below, please explain why you choose the response option that you do to the question "XXXX"*

Demographics

Gender

What is your gender?

Age

“What is your age?”

Marital Status

“What is your current marital status?”

Parental Status

“How many dependent children do you have living in your household?”

CHAPTER THIRTEEN

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